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Original Articles.

CHORIO-EPITHELIOMA MALIGNUM VAGINALE POSTPARTUM MATURUM.

ITS ETIOLOGY AND ITS RELATION TO EMBRYONAL TUMORS.*

GEORG SCHMAUCH, M.D.

CHICAGO.

During the last ten years much work has been done in the etiology of malignant growths. While the representatives of pathology still cling to the cellular etiology of tumors, as it became established through the investigations of Virchow, Rokitansky and Cohnheim, clinicians have, on several occasions, proclaimed a germ as the cause of carcinoma or sarcoma. Up to the present time all these discoveries can not withstand criticism. It might appear convenient to find for every sickness and for every malignant growth a special germ, which we might destroy through the immunizing qualities of the animal body, and especially of the blood tissues. But we are still far from a solution of this problem, at least as long as the biology and physiology of the cell are covered with such a dark veil. All the growths, as we know, benign or malignant, follow a certain type, but in recent times we have become acquainted with quite a heterogeneous, specially deleterious growth, which stands beyond the general scheme and which we have to place in a class by itself, as its matrix is formed by fetal tissues which, we may say fortunately, only in a very few cases bring death to the maternal organism. The idea that smallest particles of fetal tissues after normal delivery and puerperium might become dangerous to the mother, and in this way place human maternal life in the same category with that of some insects, whose vital problems and energy end with the act of delivery—this idea could not but be strange to the pathologist and clinician. This tumor Koesmann has shown not to be a modern product, as its descriptions can be traced back to the oldest medical observations. Both the peculiar etiology and the fact that its biology places it among the sarcomas, while its histologic structure agrees with that of carcinoma, have caused numerous detailed publications of such cases. By these we have learned that this tumor, which is more malignant than any other growth, is in very close relation to the myxoma chorii also, and this is the most important result of the modern investigation, that chorio-epithelioma may follow an apparently normal case of labor. Distinct from the latter cases are those in which the uterus has been found perfectly free from tumor.

* Read before the Chicago Gynecological Society.

HISTORY OF THE CASE.

I had the occasion to observe such a case in Berlin, in the Royal Women's Hospital, and as the clinical history of the case is a typical one, I will relate it here:

Patient.—Nov. 25, 1902, an extremely pale patient was brought to me for admittance. She gave the following history.

History.—Mrs. Frieda Z., 23 years old, no previous disease, married six years, four normal spontaneous labors, all children alive. The last delivery, Aug. 20, 1901, was followed by severe postpartum hemorrhage. A physician of our hospital was summoned, but did not think it necessary to do anything; he found the placenta normal and complete. The puerperium was free from trouble. After 14 days, the patient got up and resumed her housework. Three weeks after delivery, during the night, a sudden profuse hemorrhage occurred. Another physician who was called found a retroflected uterus, took this displacement to be the cause of the bleeding, and thought it would stop after correction of the malposition. Nevertheless the hemorrhage kept up four weeks postpartum, its source was discovered in a defect of the vaginal wall (ruptured varix?) and ligature and suture of the bleeding wound performed. Three days later a new hemorrhage took place. A third physician removed a nodule from the vaginal wall. Then the hemorrhage stopped for three weeks. The patient felt very weak during this time, but otherwise perfectly well. She got up, but soon another hemorrhage occurred, which necessitated a new operation. Eight days later a fourth operation had to be done as the nodule, the hematoma, was rapidly growing again. This time a goodly portion of the surrounding tissue was extirpated and the bed of the tumor cauterized with the Paquelin. Aside from this a curettage of the uterine cavity was done. After each operation the hemorrhage stopped for a certain time, only to start again suddenly, and as the patient thought, always in consequence of vomiting. November 7, another operation was performed by a specialist, whereon the bleeding stopped until November 24. At this time a new hemorrhage took place, associated with collapse and fainting. The family physician tamponed the vagina and sent the patient to our hospital.

This history of four or five operations caused by hemorrhage from a vaginal tumor could but force on us the suspicion of a chorio-epithelioma even before further examination.

Examination.—Out of the status præsens I will only mention that the woman was large, well nourished and extremely pale; her pulse was rather small, 110. Examination of her lungs did not reveal anything special. Over the base of the heart a systolic murmur was to be heard. After taking out the deeply blood-stained tampon on the right side of the vagina, close to the entrance at a distance of about one centimeter and a half, a wound was noticed, the size of a 25-cent piece, which had a peculiar appearance. The mucosa of the vaginal wall had a bluish color, was puffy, between the margins of the defect brown masses arose, which very much resembled coagulated blood. On the top of the growth a silk suture was found. A constant stream of arterial blood came out of the wound. The portio was a little to the left of the median line, the uterus retroflected. An attempt to replace this organ, as well as further palpation of the adnexa, seemed to me contraindicated. The urine was muddy, of alkaline reaction. The patient com-

plained of severe headache, the head was sensitive throughout on pressure, the pupils were both reacting.

Diagnosis.—My diagnosis was: Status post excisionem chorio-epithelliomatis maligni vaginalis.

Treatment.—After tamponing provisionally and binding together the knees, we gave the patient a rectal injection of 500 c.c. of saline solution. On the afternoon of the same day a new and severe hemorrhage took place, which necessitated several ligatures during light chloroform anesthesia. A thorough examination made during this anesthesia corroborated the above diagnosis. The tumor consisted of brown reddish masses and was far advanced in the right parametrium. A microscopic examination of the fresh tissue revealed an abundance of large decidua-like cells, by which our diagnosis was confirmed. The possibility of a radical operation was pretty doubtful after these findings, and, therefore, the treatment of the patient consisted at first in rest in bed, good nourishment and the administration of some hypnotics, in order to improve her general condition.

Operation.—But the tampon was not sufficient to prevent further hemorrhage and, therefore, November 29, Olshausen decided to attempt an excision of the bleeding tumor. The operation was performed in light chloroform narcosis and confirmed our suspicion that the neoplasm had proceeded into the connective tissue of the pelvis. At the attempt to excise the tumor a formidable hemorrhage commenced. A curettage of the tumor-masses by means of a sharp spoon, a cauterizing of the cavity with the Paquelin, was all that could be done. The cavity was packed with iodoform-gauze and the labia majora sewed up over the vagina and the tampon.

Death.—The patient, after the operation, was very much excited; three hours later she was in a state of collapse, the pulse was hard to feel. Ample doses of camphor-ether hypodermically as well as normal saline solution and 0.01 gram morphin were given. The pulse then became better, regular snoring set in; at 3 o'clock in the afternoon, seven hours after the operation, the patient was found dead in bed. The axillary temperature never increased above 37.5 C. (99.5 F.); the pulse-beat varied between 110 and 140; the blood showed no characteristic changes except moderate leucocytosis and general pallor.

Necropsy.—The postmortem, which was made next morning by Dr. Opitz, revealed tumors all over the body. Without entering into the particulars of the detailed report, I will only mention that the pelvic organs had not changed their normal appearance. The retroflected uterus, still in a kind of a puerperal state, showed normal mucosa. There were metastases in both lungs, kidneys, in the spleen, in the cerebrum and cerebellum; there was no tumor in the parametrium; the large defect in the vagina and the neighboring tissues slightly infiltrated; the blood-vessels thrombosed.

The pathologic diagnosis runs as follows: Chorio-epithelioma malignum vaginæ cum metastas. ren. utriusque, pulmonis utriusque, lienis, encephali (cerebri et cerebelli), anæmia universalis, embolia pulmonum sinistr., thrombosis venæ spermaticæ dextræ.

SUMMARY OF THE CASE.

A strong woman, in complete health, iv-para, is taken sick three weeks after normal delivery and puerperium with hemorrhage from the vagina, which necessitates several surgical operations. Ten weeks postpartum death occurs. What has been the real cause of death in our case? That it is due to shock or the comparatively severe loss of blood, in my opinion is out of discussion. The older partial embolism of the left lung and the general spreading of metastases would have caused death in a few days without any doubt. Thus we are placed before a chorio-epithelioma of very rapid course. How fast these tumors grow may be evident from the cases of Peters and Hitschmann, in the first of which a new vaginal nodule developed three months after operation at short distance from the scar, while in the latter within three weeks a metastasis, the size of a hen's egg, grew in the vagina.

As may be seen from the postmortem, the endometrium as well as the uterine muscle has been perfectly free from neoplasm. The microscopic sections of the curettage, which Dr. Falck has kindly placed at our disposal, do not show the least pathologic change. Even the muscular tissue, which had been removed, and justly so by this energetic operation, is normal. As the number of metastases was very great, the specimens selected for examination were taken with great care, so as to include all the most representative tissue from each organ. These were fixed in Mueller-formol. Sections from different parts of the uterus also revealed no pathologic changes. The mucous membrane was normal throughout, the uterine muscle as we find in the puerperal state. All examined metastases showed the picture of a chorio-epithelioma malignum. Parts of chorionic villi were not to be found, not even in sections of the first two excisions. The connective tissue is rich in cells and infiltrated with numerous leucocytes. Close to the epithelial covering of the vagina small and large masses of tumor-cells are seen, part of which are situated in circumscribed cavities, probably the lumen of a vessel, while in other places, when larger, they radiate out into the neighboring tissues, surrounded by leucocytes and fibrin. Sections from these tissues, as well as those from the recurrent growths, do not give a clear impression of the neoplasm, because it is disturbed by the inflammatory phenomena, which took place in consequence of the breaking through in the vagina.

In contrast to the vaginal tumors described by other authors, there is no big blood-clot to be found, which alone contains the growth, but the nests of cells are spread over the whole specimens. This behavior is the same in all cases of metastases in the vagina, where the operation did not bring relief; all fatal cases show tumor-masses lying in the tissues rather than blood-clots. From the microscopic picture we could infer that the operation could not be performed in sound tissues, as the growth was advanced too far. My examination of the right parametrium resulted in showing that most of its vessels were filled with thrombi; however, no tumor-masses were to be found in the thrombi. On the other hand, we found comparatively fresh tumor-masses in a thrombosed vessel in two sections next to the cervix, one in the paravaginal tissue, and the other in the paracervical tissue, hardly one-fourth of a cm. distant from the uterus. Occasionally the thrombi in some of the vessels of the parametrium offered an appearance, that the conclusion was warranted to have originated in tumor tissue. The most of the thrombi, however, seemed to be the consequence of the inflammation and the use of the Paquelin.

SUBJECT OF THE PAPER AND HISTORY OF THE CHORIO-EPITHELIOMA.

It is not my intention to review in the following paper all reported cases of chorio-epithelioma, not even all those cases where the uterus has been perfectly free from the growth; I only want to give here my findings and the biologic relations of this tumor. Even though the anatomic descriptions of the various authors, as expressed in their drawings, make varied impressions on the reader, an agreement has been reached to that extent, that fetal cells are in some relation with the chorio-epithelioma malignum, be it according to the theory of symbiosis of maternal and fetal cells—be it, as I believe, that the tumor is a growth from fetal cells only. All this means but a different interpretation, given to this growth. The anatomic picture is on the whole the same.

Saenger deserves credit for being the first to have recognized this growth as a special disease. In 1889 he published the first case as deciduosarcoma. The peculiar structure of large cells, without blood vessels, the likeness to the decidua spongiosa, the decidua-like appearance of the individual cells which composed his tumor, induced him to consider this growth a sarcoma of the decidual cells. Veit has clung to this idea until the last year, while Marchand has to be praised as being the first to clear the difficult histologic details of the chorio-epithelioma malignum. He has worked incessantly since 1892 to clear up the mysteries of this growth. In his numerous publications all the progress the investigation of this neoplasm has made in these ten years is found to be reflected. The difficulties in the interpretation of these tumors were to be seen first as to the nature of the syncytium, whether it be fetal or maternal product; second, in the variable construction of the reported cases. In some of these growths the Langhans cells had the biggest share; in others only large cells were found, and in some metastases only fusiform cells were seen.

Marchand has thus far to be taken as the promulgator of the whole doctrine of the chorio-epithelioma, as he was the first to pronounce that syncytium and ektoderm were composing these tumors. He distinguishes two forms of chorio-epithelioma malignum. One of them the typical form, where the character of the epithelial lining of the villi, as we find it in early stages of pregnancy, is shown in the growth as in our case. Chorio-epithelial cells surrounded and permeated by syncytium. The second one, atypical form, is characterized by the lack of the regularly formed chorio-epithelial cells—the cells of the Langhans layer. The tissue in this form is composed of large irregularly shaped cells, with large nuclei, which have the character of the syncytium, and are like the syncytial wander-cells. These cells rather infiltrate tissues, and do not form solid masses of tumor-tissue. Beside these, giant-cells with numerous nuclei are found. This classification is generally accepted, but it is to be understood that there are many transitions between these two types, the metastasis differs sometimes from the original tumor, and so on. The existence of a chorio-epithelioma, which is only built up by Langhans-cells, as some authors describe it, is to-day generally denied. Often there appear great difficulties in the interpretation of the second form, as shown by a case recently described by Rosthorn. In a woman, 28 years old, a blue-reddish nodule of the vagina was removed. Ten days later death occurred; last pregnancy three years previous. The postmortem showed numerous metastases in the cerebrum, liver, uterus, but the largest tumor was in the suprarenal gland. The microscopic picture revealed a great likeness to the chorio-epithelioma. Nevertheless the pathologist, Eppinger, declared the tumor to be of suprarenal origin, as a hemangio-endothelioma glandulæ suprarenalis. These atypical cases very probably have caused Saenger, Veit and others to take this tumor to be a sarcoma. The cases of chorio-epithelioma published in the last two or three years, where the uterus was not affected at all, have caused Veit's idea of a primary sarcomatosis of the mother to be abandoned completely. These cases will, as I think, clear up the clinical picture as well as the biologic position of this growth, by the unadulterated nature of their metastases.

HISTOLOGIC DETAILS.

In our case we have not to deal with a primary tumor, but only with metastases; their general macroscopic appearance is the same throughout—dark brown-reddish, mostly roundish nodules, which on cut-sections present a more or less pronounced fibrous appearance. The biggest tumors were to be found in the lungs and the cerebrum, organs which, through their rich blood supply and the softness of their tissue, offer very little resistance to the development of the tumor. It is now generally accepted that these growths are built up from chorionic villi and their epithelial lining. There could not be found anything of the first elements in our case, as also in many others. The cellular elements of these growths are represented by three classes: The Langhans epithelial layer, the syncytium, and the so-called syncytial wander-cells. I do not want to enter here into the histologic details of these cells. There is no difference in the structure of protoplasm and nucleus between the tumor-cells. With respect to the form, it may be said, that the roundish and cuboidal cells prevail in the teased specimens, but other forms are also to be found. The celloidin sections of the metastases present pictures that, taken altogether, are very much like those of other authors, but their difference depends on the organ which is affected. We find nests surrounded and permeated by syncytium and free syncytium, the tumor-masses themselves surrounded by more or less big cruor-masses, often also by fresh blood or sometimes inclosing the latter. We could fully corroborate the typical structure of these tumors simply from tumor-cells, without participation of blood vessels or connective tissue.

The microscopic details of this case have been described by me a year and a half ago in the *Zeitschrift für Geburtshilfe und Gynäkologie*. I will not enter them here, but only give a short description of the metastases of the brain. The peculiar anatomy of the vessels of the cerebrum which, as you know, are surrounded by a lymph-sheath, exerts its influence on the histologic picture, insofar as metastases take place also by the lymph-channels. Therefore, one may see running through the tumor-tissues a number of blood vessels whose sheath is formed by the epithelial tumor-masses; and as the supply of blood here is very great, one may find in these metastases, much easier than in other ones, well-preserved blood corpuscles, without any symptom of coagulation inside of the meshes of the vacuolated cells, which have to be taken as a sign of persisting circulation. Even the propagation of the tumor in brain-tissue differs somewhat from that we observe generally in the lungs, the connective tissue of the pelvis and the other organs.

We nearly always see a sharp contrast between neoplasm and the brain substance. Epithelium, as well as syncytium, is throughout arranged in such a way that the external sheath of the tumor is surrounded by a small strip of syncytium, and syncytial wander-cells are nowhere to be found in the brain tissue. In the fissures, the tumor-cells penetrate in spindle form, with a deep-stained protoplasm. The mode of propagation is as follows: Vacuoles develop in the syncytial border, into which the blood current may break. Thus we may see in the marginal parts the syncytium lifted off from the epithelium by means of the blood, when blood corpuscles may be found in the surrounding brain tissues also. It is, therefore, not the arrosion of the vessels which produces the hemorrhage, as is the general opinion, but rather a kind of breaking down, a wrecking caused by the vacuolization of the syncytial cells. In this manner conditions are brought about which show the syncytial cell-border removed from the cerebral

tissues by little blood only, whereas it is separated by larger blood-masses from the rest of the tumor-tissue, the epithelial masses. This is understood as a sign of the great coherence of the syncytial protoplasm. Nowhere, as in other malignant growths, is there an inflammatory wall, a zone of proliferation to be seen. The progress of the chorio-epithelioma is not by arrosion; the delicate and soft structure of the syncytium destroys the neighboring tissues only by their own collapse. From the microscopic sections which are at our command, we have to draw the conclusion that the initial stages of the chorio-epithelioma are to be seen in the cells lying separate in the tissues and cruor-masses, the so-called wander-cells. Under favorable conditions of nutrition, these are multiplied by mitosis; some of them become giant-cells. In these, as well as in the mononuclear tumor-cells, develop vacuoles, which give rise to great distension of the cell. In these vacuoles also appear cells that resemble Langhans-cells. The origin of these cells becomes, in our opinion, evident from the picture of the metastasis of the brain. There we see in the upper half wide cavities partially filled with well-preserved blood corpuscles, and at the points where the meshes interlace we see tumor-cells of the appearance of the Langhans-cells, which are sometimes surrounded again by syncytium. So we are forced to the conclusion that these cells do not break in from the outside, but must be derived from the nuclei of the syncytial cells. A tumor-mass having been built up in this way, the farther extension of the growth, not taking into account the propagation by mitotic increase of the epithelium, is mostly a peripheral one. The much-stretched syncytium of the periphery, which by its position immediately in connection with the blood current is under most favorable nutrition, becomes thus condensed in one place and puts forth buds.

In these appear nuclei and later on vacuoles, etc. I failed to observe mitosis in the syncytium. In the syncytial buds seem to rise nuclei out of the protoplasma. In this way the growing of these tumors resembles, in my opinion, very much the process of regeneration of muscles and development of blood vessels. Nuclei appear in the buds of the syncytium in a similar way as in buds of muscles and vessels. There, as well as here, we see excrescences, buds, of the protoplasm, and arising in these nuclei and vacuoles. In the buds of blood vessels, as well as in syncytial buds, the protoplasm becomes vacuolated and the blood current breaks in.

NATURE OF THE SYNCYTIUM.

Therefore, I think the syncytium is no specific cell-species, but only a stage in the cell-life of the Langhans epithelium, of the trophoblast. Such metamorphosis of the cell-form, brought on by the surroundings, by the different conditions of life, is not such a very rare occurrence in physiology. The cylindric epithelium of the epidermis becomes horny; the cell of the marrow of the bones first without granulations becomes filled with eosinophile and neutrophile granules. To the pathologist the change of tissues that are closely related, for example, myxomatous in fat-tissue, connective into bone-tissue, as in some cases of arteriosclerosis, is long and generally known, as well as the metaplasia of epithelium in the endometrium and in the mucosa of the urinary passages.

Now, if we take syncytium and Langhans layer to be different stages of the same cells of the trophoblast, then the question of the origin of the syncytium is thereby answered in the sense of fetal descent. This question has kept the observers busy for a long time, and they have tried to come to an agreement by the examination of very early ova of men and animal. Siegenbeck-Heukelom's and Peters' researches resulted in that the majority of authors now have decided in favor of the fetal origin of the syncytium.

That endothelium as well as epithelium may undergo during pregnancy syncytial changes is amply shown by Schmorl, Pels-Leusden, Marchand and others. Even in 1897 I was able to demonstrate such syncytial endothelium in the biologic society at Koenigsberg, and concluded that they were due to gestation. The temptation, therefore, was quite strong to assume analogous changes of the epithelium of the uterine glands under the influence of pregnancy, which at that time are forming the lining of the villi. It took fourteen years of diligent research to find out the real nature of the syncytium and the chorio-epithelioma malignum. Most authors were inclined to place this tumor in the well-known ranks of carcinoma or sarcoma. A great diversity of opinion existed; the different names applied to this growth, as deciduoma malignum, deciduosarcoma, syncytiosarcoma, syncytioma, chorio-epithelioma malignum, demonstrate this. Additional and final information developed during the last year from the investigations of Schlagenhaufer and Wlassow. By their findings the idea of an endothelial genesis of the syncytium became untenable. Schlagenhaufer noticed chorio-epithelial growths in a teratoma of the testicle and its metastases in a man 43 years of age. The picture he gives of metastases in the lungs resembles perfectly that which you see here; there also in the epithelial nests some cells grow richer in protoplasm and larger, hence are in a stage of transition to syncytium. Schlagenhaufer, by looking through the literature, found four other cases with the same findings. Three of them were tumors of the testicle, the other occurred in a 13-year-old girl who had never menstruated.

The second case concerned a locksmith, 40 years old, who was dissected several years previous by Breus. The tumor of the testicle had perforated the blood vessels and had produced in the heart formations which were macroscopically perfectly like the vesicles of hydatid mole. This strange discovery—a mole in the heart of a locksmith—certainly removed all doubts as to the possibility of the maternal organism being in any way connected with the development of the epithelial lining of the villi. The villi in the Breus case consist of a soft myxomatous tissue. The epithelial layer is in some places syncytial; in others there are vacuoles or large cells in a state of proliferation. Though their appearance resembles very much the vesicles of hydatid mole, this interpretation is lately questioned by Risel, on account of lack of uniformity in the structure and the appearance of cavities in them that are lined with epithelium. Schlagenhaufer himself concedes that these hydatid formations have been brought on by the breaking in of ektodermal elements into the blood vessels, and that we have to regard them as resulting from the physiologic conditions. But otherwise one has to agree with Pick, who strongly repudiates Risel for doubting his observations. At the operation of a tubal abortion a dermoid cyst of the same ovary was removed. In a separate cavity of this common cystic teratoma, Pick happened to find a growth of the nature of hydatid mole, about the size of an apple. Pick is, in my opinion, perfectly right, if he says that this is not a chorio-epithelial growth, such as is found in the teratomas of

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the testicle, but the cyst and the mole have to be considered part of the dermoid formation itself.

The last doubt as to the pre-existence and embryonal origin of such chorio-epithelial formations was destroyed by another observation made by Pick only a few weeks ago. He succeeded in finding typical chorio-epithelial tissue in a teratoma of the ovary of a girl 9 years old, a tumor removed eight years ago.

This is another important argument that embryonal germs may produce fetal membranes, a point which we will have to discuss later on; hereby the question whether pregnancy is necessary to develop such formations is settled finally.

Chorio-epithelial growths in teratomas of the testicle are not so very rare, as shown by Wlassow, who was able to find these tissues three times among twelve cases of these tumors. Similar statements were made by Schmorl, Steinhaus, Emanuel, Bostroem, Hansemann. In Bostroem's case it was a retroperitoneal tumor in a man, which had made many metastases in the brain. These proliferations of cells of ektodermal origin in teratomas of the testicle and their metastases, that have to be identified with those in chorio-epithelioma malignum, have proved that pregnancy is not necessary to build up syncytial masses, and that neither the maternal epithelium nor the endothelium has anything to do with them; also that no symbiosis of maternal and fetal cells takes place, but fetal cells alone may form a tumor of the appearance of the chorio-epithelioma malignum.

Marchand pronounced in his second paper the oneness of the syncytium and the Langhans cell-layer, and thinks it very likely that the syncytium is able to proliferate; as well as Virchow and after him Kossmann have expressed the opinion that the syncytium is composed of single cells. Signs of an indirect division of the nuclei we were, like many other authors, unable to detect. On the other hand, our pictures demonstrate that a direct division, a process of budding and splitting takes place. Furthermore, we think we may conclude from our pictures that the proliferation of the syncytium does not always lead to a formation of giant-cells, but that inside of the syncytial masses cells may be formed of the shape of the Langhans cells. Pels-Leusden arrived at the same conclusions in his researches on the serotinal giant-cells. He describes fully in this work the process of fragmentation in protoplasm and nucleus. Pels-Leusden says the syncytial cells are producing daughter-cells, which partly grow into the large giant-cells, in other places again undergo a change in small, epitheloid cells, with one to three light-colored nuclei and a brighter protoplasm. Hence the same process as we find in the metastases in the brain at the knots of the meshes. Pels-Leusden thinks these cells have to be brought into connection with the regeneration of the glandular epithelium, which opinion will be hardly shared by anybody. As stated before, we only can regard the syncytium, like other authors, as a certain stage in cell life, but in contrast to the general opinion, we consider this stage not a phenomenon of degeneration, not a sign of an ended function of the cell; we rather want to have it considered a symptom of the maximum vitality of the trophoblast. Therefore, the name of syncytioma seems to be quite well applied to these tumors; however, I choose in this paper the name of chorio-epithelioma, as this is used most frequently by the modern writers.

Now the most interesting event in the history of the chorio-epithelioma malignum was when the same cellular proliferations in teratoma of the testicle, which, as I have shown, cleared up the mystery of these tumors and the syncytium in German science, an opposition arose in England in the year 1897. At this time a commission was appointed to investigate the question of the deciduoma malignum. Kanthack's case of a very rapidly spreading teratoma of the testicle, whose metastases showed cells of chorio-epithelial character, was taken at this time by Eden, who headed this commission, as a counter-argument against the German doctrines; the commission reported that the deciduoma malignum was no specific tumor.

THE TIME OF ORIGIN OF THE CHORIO-EPITHELIOMA.

Another important question in the pathogenesis of these tumors is the time when they rise. In answering that, only those cases can be taken into consideration in which the uterus has been perfectly free from tumor. They are enumerated in Peter's paper. But even among those the cases of tumors after abortion and hydatid mole do not permit reliable conclusions, because the term of the expulsion of the fetus is not coincident with its death. Six such cases are reported, Schmorl, Lindfors, Huebl, Wehl 2 cases, Schmauch; after normal labor, all the patients died. Reports of the autopsy exist only in the cases of Schmorl, Lindfors and Schmauch. The other cases, in which the endometrium has been sound, where the tumor was situated in the muscle, will not be discussed here. The cases of metastases and infarct of the lungs, which are reported as healed, are of little value also, as in none of them tumor masses became expectorated. The average time, when the neoplasm became manifest, is, according to McKenna, six to ten weeks. In the cases just mentioned of chorio-epithelioma vaginale postpartum maturum, the time elapsing between labor and appearance of the tumor is about the same, three to ten weeks. The vaginal metastasis developed also comparatively early in these cases and all of them without exception have resulted fatally in from ten weeks to one year. It is very improbable that there existed a tumor and metastasis during the pregnancy, as the labor was normal, occurred in term and the child was living, except Huebl's case, where a child was delivered which had been dead a few days. This case is especially interesting, as it was preceded by a hydatid mole one year and a half before the birth that gave rise to the tumor. All cases showed the metastases over the whole body. Concerning the size of the individual metastasis, the biggest tumor was to be found in the lungs and the cerebrum. It is not remarkable that the lung should be involved, but the fact that the brain became involved in so short a time and in such large tumors, conveys to us the idea that the extensive dissemination must have occurred at the same time. The tumor in the vagina, as Schmorl assumes, only seems to be primary. There is no primary tumor in our case, but there has taken place and probably sub partu a general dissemination of tumor infection. However, this is not always necessary, as those cases show where the neoplasm was limited to the uterus and its adnexa, and which were cured with lasting success by operation, of course, only after abortion.

Could dissemination of tumor cells have taken place toward the end of pregnancy? The fatal end of all the cases of chorio-epithelioma after labor in term speaks in favor of this idea. If we assume that the vaginal metastasis is synchronous with the others, then this view becomes very improbable, as otherwise without any

doubt a tear of the vagina would have occurred during labor. The growth of these tumors is an extremely rapid one, as can be judged by several unobjectionable observations, where within 14 days a recurrence of the size of a walnut developed. It is the vaginal chorio-epithelioma that forces upon us the idea that the propagation takes place during labor. Peters, too, states that a retrograde embolism of the vaginal veins can only have occurred during labor. While in earlier days we only believed in propagation of syncytial cells in eclampsia, nowadays it is shown by Schmorl, Pels-Leusden, Veit and others that such a "deportation," as Veit names it, is the normal way, even if not always to such a high degree. In my opinion it has to be regarded as a physiologic process. The syncytium is inclined to form buds and prominences, and often they are only connected with the syncytial layer by a small pedicle. Surrounded by the maternal blood, they might easily be torn off and dragged along. This without doubt will be facilitated by the violent shaking in eclamptic convulsions. That a deportation takes place during abortion, too, is shown by the cases following abortion. That it happens very often after hydatid mole, in which case the lining of the villi undergoes an abnormal proliferation, is demonstrated by the fact that chorio-epithelioma follows very frequently this pathologic condition.

Anatomic researches regarding embolism of parenchyma cells, made by Poten in 7 cases of pregnancy, corroborated our opinion of the physiologic possibility of deportation of parts of villi. Poten succeeded in finding torn off villi in the lumen of blood vessels of the uterine muscle in earlier and later months of pregnancy. As in some of his cases labor had not yet started, we only can join the conclusions of this author, that the deportation of villi might occur in every case of pregnancy and at any time. But it is still an open question if this dissemination is limited to the uterus or if the whole system of the woman becomes infected with these cells during pregnancy.

THE ONKOLOGIC PLACE OF THE CHORIO-EPITHELIOMA.

In onkology a special position has to be given to these tumors, as to the teratomas. Even though the structures, which build up these tumors, are epithelial, they are not carcinomas; also though they propagate by means of the blood vessels, common to sarcomas, they must not be numbered among them; it is fetal tissue, a tissue foreign to the maternal organism, which gives rise to these tumors, resembling the embryomata and yet different in that only the ektoderm participates.

Another question is, if mesodermal parts are necessary for the development of a chorio-epithelioma malignum. The discovery of villous parts was one of the first arguments for the fetal origin and many authors went so far as to demand the presence of villi in each case. To-day we are inclined toward the opinion that the deportation of villous substance has nothing to do with the development of the tumor. There has never been detected the least proliferation on the villous tissue itself, and very frequently phenomena of degeneration were found in it. In the metastasis of a carcinoma, the propagation of epithelium is quite sufficient to build up a tumor, in the same way as an implanted cell complex may give rise to so-called "implantation metastasis." In the carcinoma and sarcoma we assume a special malignity of the individual cell; this special epithelial cell emancipates itself from the others. It takes on a new vital power and starts through the lessened resistance of the affected individual a harmful proliferation, without purpose. How is it now with the epithelial lining of the villi? Have we to attribute to the latter, as a fetal product, as a rest of the trophoblast, a special capacity of proliferation? Why does this tissue, the physiologic deportation accepted, grow in one case exuberantly, without bounds? Why does it in other cases only give rise to a local tumor, and why finally, does it remain in most cases without any effect? In consequence of our entire views about embryomata and embryonal tumors we are accustomed to attribute to the stray embryonal cells, to the strayed germs, a strong energy of growth. To make these points more easily understood I shall have to return with a few words to the origin of the embryonal tumors.

OUR MODERN VIEWS ABOUT EMBRYONAL TUMORS.

Embryonal tumors are the only ones whose etiology is at least partially known. We know nowadays through the researches of Marchand, Bonnet, Wilms and others, that the parasitic monsters are congenital tumors and have to be traced back to the earliest stages of development. From these tumors, commonly called teratomas, we previously have separated the embyromata (as Wilms calls them) and the dermoid cysts of the ovaries. But the teratoid growths of the ovaries and the testicle contain, as Wilms, Hanau and others have shown, derivatives of all the three germinal layers. Hence the dermoids of the ovaries, which sometimes comprise very remarkable structures, as finger with fully developed nails, whole extremities, etc., as well as the teratomas of the testicle have to be ranked in their etiology as equal to the fetal inclusions. However, we have to differentiate from these tumors the real dermoid cysts, which arise through an ingrowth and detachment of the cutis and ektoderm. By this process organs and tissues, which are lying close by, might be drawn along, and thus the growth might become quite a complicated structure by the appearance of bone and cartilage and other substance.

These are the tumors which Wilms calls bidermones, in contrast to the first group, which he names tridermones. Etiologically there is a great difference between these two groups, as stated very strikingly by Wilms, in so far, as the dermoid cyst arises at the time of the existence of the germinal layers, whereas the teratomas are products of the epoch of the furrowing of the egg. The old opinion of a parthenogenesis, which means that in the ovulum a kind of self-fecundation takes place, by means of the polar globules, which were to be regarded as male cells after Minot, is nowadays abandoned by most authors. There does not exist a parthenogenesis in mammalia, only the ripe ovum and that only after fecundation is capable of development. Marchand-Bonnet's idea of a uniformity of fetal inclusions and teratomas of the sexual glands has taken the place of parthenogenesis and is now generally accepted. The congenital foundation of these tumors and the possibility of their development at any age has to be recognized nowadays. This much is known, while it is still a point of controversy whether a fecundated polar globule, as Marchand suggests, or a strayed and afterwards included blastodermic cell, as Wilms thinks, is the original source of these teratomas. Marchand already lays down the necessity of proving fetal membranes in these tumors, to support his opinion, and Bonnet also demands their existence, as the only means of differentiation of the real embryoma from the dermoid cyst. It seemed first as if this demand was fulfilled by the discovery of chorio-epithelial proliferations and hydatid formations in teratomas of the testi-

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cle and by Pick's cases of dermoid cysts. However, these facts did not bring about any further advance in our knowledge, because there is no reason why a misplaced blastomere should not possess the faculty to build up fetal membranes and their derivatives. We do not as yet know why in some of the teratomas of the testicle such immense chorio-epithelial masses are formed, why in these cases the proliferation of the ektoderma takes such an appearance. On the other hand this phenomenon of an absolute preponderance of one tissue is not without parallel in pathology, as, for instance, the dermoid of Saxer, where there was but one tooth imbedded in the ovarian substance, and the cases of so-called struma ovarii.

THE TERATOID HYPOTHESIS OF THE CHORIO-EPITHELIOMA.

Schlagenhaufer is perfectly right in explaining the chorio-epithelial proliferations in teratomas of the testicle by the Marchand-Bonnet theory, in referring these teratomas to stray blastomeres, but he goes still farther and asserts that the chorio-epithelioma malignum of the woman is nothing more than a teratoid growth. He says in the first week of pregnancy a germ of the fecundated ovum, which otherwise is used to develop fetal membranes, gets misplaced and gives rise after expiration of this or a later pregnancy to the chorio-epithelioma, while the abortive ovum (in which only fecundated polar globule is developed, while the rest perishes), will produce a hydatid mole.

According to Schlagenhaufer, the chorio-epithelioma of the woman in its genesis is equal to the fetal inclusions and teratomas. However, this opinion must be strongly objected to. A principal difference is to be seen in the fact that the latter tumors proceed from the same ovum and autochthonously develop growths, in the same individual, at a later period of life; whereas the chorio-epithelioma is in a certain way a heterochthonous teratoma, that is, the germ that produces this tumor belongs to a second individual, though this second individual be the product of the bearer of the tumor. Suppose we accept the idea of abortive, included polar globules, suppose we could conceive that germs which remained behind in the development, get misplaced at the time of the segmentation and the formation of the germinal layers and become imbedded in the layer of any other organ, as for example that of the sexual organ; still we have no right to assume such a degree of misplacement, that in a second the maternal organism should arise a teratoid tumor, a chorio-epithelioma, be it in the parametrium or in a still more distant organ. Schlagenhaufer's theory always assumes a primary tumor. Accepting his idea of far-spread germs of the fecundated ovum, theoretically we should have to expect teratomas to occur as a consequence of pregnancy, something so far entirely unknown. In all cases of teratomas with chorio-epithelial proliferations the latter only make up a part of the tumor, that part which chiefly produces metastases. The tumor itself, as well as some of the metastases generally present elements of the two other germinal layers. However, in none of the many cases of chorio-epithelioma malignum have so far parts of the meso, and hypoblast been discovered. If Schlagenhaufer says that a mature villus is no longer able to develop sufficient energy of growth to result in a chorio-epithelioma malignum, we shall have to reply that in the cases of Pick, Poten-Vasmer, Gebhard and others, a direct connection between the tumor and the deported villus is to be seen.

THE DIFFERENT THEORIES ABOUT CHORIO-EPITHELIOMA.

By our anatomical researches we are forced to accept a physiological deportation of the lining of the villi, and, as we think, there are only two possibilities by which to explain the histogenesis of our tumors. One of them is, to attribute to the epithelium of the villi a special pathologic energy of proliferation in all cases in which chorio-epithelioma arose after pregnancy. The second one is as follows: The trophoblast and its developmental stages, Langhan's epithelium and syncytium, preserves the faculty of proliferating, which is the property of all embryonal tissues, during the whole time of pregnancy, but is displayed only in case of certain changes of the maternal organism. Hitschmann and Lindenthal, through their findings on a young ovum, and Franz by his examination in a case of ovarian pregnancy, made it evident that not the villi themselves penetrate the serotina, as we thought, but that the lining with trophoblast enables them to assume this function. Just as the syncytial cells of the chorio-epithelioma malignum are progressing in the tissues of the different organs, in the same way the cells of the trophoblast are pushing forward in the mucosa of the uterus and in the spongiosa. In the very early days of pregnancy the villi are not covered by syncytium and Langhan's cells, but only by the masses of the trophoblast. Both authors point to the identity of the chorio-epithelioma malignum and the development of the ovum in utero and render it clear, that this advance of fetal cells in the maternal tissues is without comparison in the whole field of physiology and finds an analogy only in the advance of tumor cells. The question is now, do we have to attribute this quality to the trophoblast, which is differentiated into syncytium and cell layer or even totally converted into syncytium?

Anatomic examinations of the epithelial lining of the villi of the placenta, women, which afterwards became ill with chorio-epithelioma, unfortunately do not exist. The idea that there might have been a malignant tumor of the placenta has been sufficiently disproven. Great changes could not have taken place, as mentioned above, as otherwise the birth of a living mature child becomes improbable. The placenta in our case, in which we had an atonic hemorrhage from the uterus had been inspected by a skilled physician, who could not detect any macroscopic changes.

The only anatomic foundation that could help in clearing up the etiology is the proliferation of the villous epithelium in cases of hydatid mole. Even there the differentiation between malignant and benign mole, as claimed by Neumann, could not be maintained. So far we are not able to prognosticate in a case of hydatid mole whether it will be followed by chorio-epithelioma malignum or not.

Marchand explains the proliferation of the lining of the villi in hydatid mole, as caused by the obstructed transit between mother and ovum. This interference with the transportation of nourishment from the maternal blood to the fetus, by means of the epithelial lining of the villi, increases the physiologic energy of proliferation, which is the property of this epithelium. Overnutrition pushes the limit of physiologic proliferation towards the pathologic side. The difference in the time of the expulsion of the fetus determines whether the physiologically deported cells give rise to a mole or to a chorio-epithelioma. Peters accepts this opinion and tries to explain thereby the histogenesis of this growth. According to him it is only the overnutrition

which stamps the character of malignancy on these cells which gives them the power to defy the natural protective forces and to build up such a deleterious tumor. In cases of abortion, where the fetus usually has perished some time ago, we might not object to this hypothesis, but not in cases of labor at term and with living child. Peters himself seems to see herein the weak point of his whole theory. In my opinion this theory contains the thought of such energy of proliferation of the trophoblast, that even after differentiation into syncytium and cell layers, it might be able under certain circumstances to acquire a foothold in the maternal organism. The idea of overnutrition itself being able to produce malignancy is against my pathologic feeling. It might very well lead to a hyperplasia and hypertrophy, but not to such an emancipation of the cell that the latter becomes malignant and produces metastases.

THE RELATIONS BETWEEN CYSTIC DEGENERATION OF THE OVARIES AND HYDATID MOLE.

Recently, on account of the frequency of the combination of hydatid mole with cystic changes of the ovaries, some authors have attributed some influence on the degeneration of the villous epithelium and the villi, to the functional activity of these organs. Some years ago Born stated as his belief that the corpus luteum verum of pregnancy is to be considered a gland with internal secretion, whose task is to regulate the process of the imbedding and development of the ovum. Fraenkel has confirmed this theory by numerous animal experiments on rabbits and in this way has proven that the evolution of the ovum depends on the undisturbed function of the corpus luteum. He advanced the hypothesis that through the pressure and tension of the cysts of the diseased ovary, the corpus luteum is damaged in such a way that its normal influence on the ovum can not be exercised and therefore the latter becomes diseased and develops a hydatid mole. Stoeckel later on demonstrated that the multiple cysts of ovaries in hydatid mole, in all cases he was able to examine, were corpus luteum cysts, and that in all these cases lutein cells were to be found spread throughout the stroma of the ovaries. Runge and Pick have corroborated this statement and the latter has named this state "polycystic luteinic degeneration." Relying on the Fraenkel-Born theory of the influence of the lutein secretion, Pick thinks it possible that the overproduction of lutein, as it is to be found in such ovaries, its overabundance might cause a pathologic proliferation of the epithelial lining, with its consequences, the hydatid mole or the chorio-epithelioma malignum. His chief purpose is to emphasize the fact of the frequent presence of lutein cysts and scattered lutein tissue in the ovarian stroma in these cases. He is well aware of the fact that these changes can be seen in other conditions, and that in some cases, as for instance in the one described by me in this paper, the ovaries were of normal size. Whether there were any scattered lutein cells I can not state now, as the sections of the ovaries are not now in my possession.[1] Therefore we can not as yet accept a direct connection, a strict interdependence of these two conditions. What the cause is and the consequence can not be clearly distinguished; the lutein cysts might be the consequence of hydatid mole.

1. The histologic changes in the ovaries of my case, which resemble much more the picture of the so-called carcinoma folliculare of the ovarium, will be described later on.

BIOCHEMICAL THEORY OF THE CHORIO-EPITHELIOMA.

The second theory of the etiology of the chorio-epithelioma malignum might, as mentioned above, start from certain changes in the maternal organism. Instead of attributing to the epithelial cell layer an abnormal dignity, as Peters puts it, this theory would assume only the preservation of the physiologic energy of growth, which is owned by all embryonal tissues, until birth.

We have explained above that we regard the detachment of syncytial cells, that is fetal products, as something physiologic, something that takes place in every labor. The question, whether this process occurs during pregnancy, is also discussed and confirmed by Poten's researches. We really do not know any reason why there should not occur such a loosening or deportation of parts of villi, which are immersed in the streaming blood during pregnancy. The epithelial lining of the villi transfers the nourishing material to the fetus. Persistence of these cells during the whole period of pregnancy can hardly be assumed. Its secretions, the products of the fetal metabolism, as well as the dead and living cells, are emptied into the maternal blood. If we attribute to the embryonal cells such a great energy of growth, then the organism of the woman ought to have protective forces against them, forces which annihilate the physiologic deportation of parts of villi. We owe to Ehrlich's ingenious investigations quite a new insight into the biology of the cell. According to his side-chain theory, the animal organism has the power to produce antibodies against foreign cells and their products, so-called cytolysins and heterolysins. Now the organism of the child is not a foreign body in the true sense; it belongs to the same genus. But even in animals of the same genus Ehrlich and Morgenroth, by devising special methods, have succeeded in producing cytolysins, autolysins. These antibodies necessarily have to be formed in the blood of the pregnant woman against the scattered cells and cell products. Veit, Halban, Ascoli have taken up this idea and Veit has called this body syncytiolisin. Obstetrics especially may be expected to derive great benefit from the discovery of isolysins and autolysins. Beside eclampsia, hyperemesis gravidarum, the habitual abortion and some other phenomena, which so long have been ascribed to the mysterious "irritation of pregnancy," will be brought closer to our understanding. The results of these investigations so far still vary greatly. The influence of the serum of the child on the maternal blood is denied by some authors. While Veit has succeeded in establishing the dissolving influence of the syncytiolysins on the human placenta, Ascoli produced albuminuria and eclamptic attacks of isosyncytiolysins. The effect of these antibodies, as Ehrlich states, is not a specific one, that is in syncytiolysins, agglutinating and dissolving for syncytial cells only. They rather display their activity wherever they find fitting receptors. According to Ehrlich's theory, we therefore had to attribute to the body of the pregnant woman the ability to build syncytiolysins, which have to dissolve all possibly scattered embryonal cells. Consequently it is not the wrapping round with fibrin, as Schauta has declared, nor the deficient ability of the blood to coagulate, nor the inability of the blood to secrete fibrin, as Albert suggests, which further or hinder the proliferation of the scattered cells, though these factors might co-operate, but the natural immunity of the maternal body. To attribute to these scattered cells a special dignity, as Peters thinks, is, in my opinion, more hypothetical than

our theory of a defect in the normal protective powers of the female system. The latter has rather more probability after the experimental findings, quoted above.

Whether the deportation took place in earlier months of pregnancy, or only *sub partu*, is, in my opinion, indifferent; the embryonal cells of the villous lining behave like cells of a neoplasm and circulating in the blood, under the most favorable conditions of nutrition have to proliferate, when the protective powers of the body do not take effect.

If we use this theory as a basis for the etiology of the chorio-epithelioma, then the cases of benign metastasis will be explained easily. The scattering is physiologic and the proliferation is naturally facilitated, if a whole villous trunk has entered the circulation. As long as the organism is producing antibodies the deported cell mass will remain local; surrounded by fibrin and blood masses it will be buried or expelled. Local tumors only will be possible in the case of languishing protective powers, as after severe loss of blood, and might be removed by an operation successfully and completely.

A return of the protective forces after general strengthening of the body may hinder the dissemination of the germs. General proliferation is only possible when there is a total lack of immune bodies. The time when the tumor is first manifest and spreads will not so much depend on the mass of disseminated cells as on the ability of the harmed organism to create sufficient receptors to take up the final destroying struggle. After eclampsia, in which the largest quantity of cells are deported, chorio-epithelioma has never, so far as I know, been observed. The development of hydatid mole, too, is more easily understood if we accept this theory. The ovum in the uterus is biologically equal to a parasite, if this comparison may be permitted, and labor only a kind of self-help. The antibodies, formed in the maternal organism, have the property of keeping the trophoblast within bounds. Lack of these will bring on proliferation of the epithelial layer of the villi and in consequence thereof death of the fetus. The same defect explains in the most natural way the frequent appearance of chorio-epithelioma after hydatid mole.

All patients with chorio-epithelioma malignum vaginale after labor at term, in which the uterus has been free from growth, have so far died. During the six years since the publication of Ehrlich's side-chain theory, beside the hemolysins, we have become acquainted with a nephrotoxin, hepatotoxin, neurotoxin, spermatoxin, etc.; and Schmorl, by rendering ineffective the antibodies, produced in the liver of rabbits changes typical for eclampsia, by injection of placental cells. If we can already consider the possibility of destroying carcinoma by cytolysins, how much nearer are we, as I am convinced, to success in fighting the chorio-epithelioma, whose antibodies are no longer far from our understanding, in all those cases where an operation seems to be hopeless? The question is only to restore natural protective forces, which are lost or perhaps only lack points of attachment.

CONCLUSIONS.

1. The syncytium is of fetal origin.

2. The syncytium and the Langhans-cell are different stages of the same cell, the trophoblast.

3. The chorio-epithelioma malignum is a growth consisting of fetal cells only. As a growth, built up of epithelial cells without blood vessels and connective tissue, it has to be placed in a class by itself.

4. The chorio-epithelioma of the woman is always a consequence of pregnancy; it has nothing to do with teratomas, as these are inborn growths.

5. The chorio-epithelial formations in teratomas of the testicle and the ovary are proving the fetal origin of the syncytium, but are totally different from them. The chorio-epithelial masses in these tumors proceed from the ektodermal cells and are in their histogenesis equal to all other ektodermal products in teratomas, as the neuro-epithelium, etc.

6. The deportation of parts of villi and their epithelial layer is a physiologic fact and probably takes place during the whole period of pregnancy.

7. The epithelial layer of the villus preserves its embryonal energy of proliferation until birth. Therefore a chorio-epithelioma may arise at any time of pregnancy, when the natural protective forces of the maternal organism become deficient.

MESENTERIC EMBOLISM AND THROMBOSIS.

A STUDY OF TWO HUNDRED AND FOURTEEN CASES.

JAMES MARSH JACKSON, M.D.
Out-Patient Physician to the Massachusetts General Hospital.
CHARLES ALLEN PORTER, M.D.
Assistant Surgeon to the Massachusetts General Hospital.
WILLIAM CARTER QUINBY, M.D.
BOSTON.

Though, comparatively speaking, embolism or thrombosis of the mesenteric vessels is rare, it is, nevertheless, one of the most serious of abdominal diseases. This, together with the facts that, until recently, the attention of the profession has not been called to the condition by any comprehensive article, and that those existing are not in the English language; that it forms a disease picture of very difficult clinical diagnosis, and that in any case, operation offers practically the sole chance of recovery, seems to us to justify this investigation.

In the list of cases, 214 in number, on which this article is based, an attempt has been made to collect those cases occurring in our Boston hospitals, and further to collect all those which were accessible from friends in the profession and from the literature. In every case, where possible, the original report has been consulted.

Pathologically, occlusion of mesenteric vessels was described as early as 1847 by Virchow.[1] The clinical picture received but little attention, however, till the article by Litten[2] in 1875.

There followed experiments by several men, notably Cohnheim, Litten, Cohn and others, which showed conclusively that the results of stoppage of blood supply to the intestine are divided into four stages: First, necrosis; second, gangrene; third, hemorrhagic infarction; and fourth, abscess formation.

The general results of stoppage of blood supply are well given by Ribbert in his *Allgemeinen Pathologie* (Leipzig, 1901). He says (p. 162):

> What happens to a vascular area in which the circulation is incompetent? It must necessarily at last be destroyed, but the conditions of this destruction are not always the same.
>
> In the cases in which an end artery is involved the area, under certain conditions, receives so little blood from capillaries or veins, that it becomes essentially paler than the surrounding areas; when beside this, the small amount of blood

1. Ges. Abhandlungen, pp. 338, 420, 451.
2. Virchow's Archiv, vol. lxiii, p. 389.

which is present loses its color, the area becomes clear, yellow white.

More frequently, however, a marked filling of the area with blood occurs, which, by its presence, stops further accession of blood to the part. Then in the first few hours the area is a red color, but becomes rapidly pale by decolorization of the contained blood, which occurs by separation of the blood coloring matter, this leaving by diffusion or disintegration. Then the area is pale and forms an anemic infarct.

In other cases, either of end artery or of insufficient arterial anastomosis, the afflux of small quantities of blood continues, either from the narrow, arterial anastomoses or from the capillaries or veins. The area then remains red. Microscopically the vessels are turgid, but with no motion of their contents worth mentioning; or often complete stasis occurs. But we soon see something more. We see in the experiment that the blood corpuscles leave the vessels by diapedesis, reaching the surrounding tissues, the spaces of which they fill. Then the area takes on a dark, black-red color, and a firm consistency. A hemorrhagic infarct has occurred, which does not grow pale, but preserves its red color.

He then (p. 166) contrasts intestine to kidney, brain, spleen, etc., in which we usually get an anemic infarct, saying:

It is different in the case of the intestines. Occlusion of the superior mesenteric artery always causes hemorrhagic infarction. To be sure, there are present anastomoses with other vessels, but these do not suffice for nutrition. But they carry so much blood to the part that the excluded area is made turgid and diapedesis takes place. Then the gut wall and mesentery become black red, and thickened by the mass of blood. Similar hemorrhagic infarction occurs also from venous stasis.

Experiments done by Welch and Mall[2] on this point show, first, that the blood which produces the hemorrhagic infarction enters by the anastomosing arteries, and not by reflux from the veins; second, that the hemorrhage can not be explained by any demonstrable change in the vascular wall, but is the result of retardation and stasis of the circulation, and clumping of red corpuscles in the veins and capillaries, attributable in large part in cases of arterial obstruction to reduction or loss of lateral pulsation of the blood current; third, that the ischemia is increased by the tonic contraction of the intestinal muscles which follows for two or three hours closure of the superior mesenteric artery; and that, fourth, the sudden and complete shutting off of the direct arterial supply to a loop of intestine 5 to 10 cm. in length, is followed by necrosis and hemorrhage of the loop, even when the vessels at each end of the loop are open.

From this it is evident that closure of mesenteric vessels does not, as a rule, call forth the formation of a competent collateral circulation, in spite of their rich anatomic anastomoses, such as is usually established in other areas of the body. The reason for this condition has been the object of much experimental research. (For a critical review of the various theories concerning the absence of collateral circulation, the reader is referred to the recent and very able articles on the subject by Deckart[4] and by Neutra,[5] only the more important of which we abstract here.)

THEORIES CONCERNING ABSENCE OF COLLATERAL CIRCULATION.

Cohnheim[6] explains the intestinal infarction which occurs, in spite of the manifold arcades anastomosing with the vessels of the muscularis, submucosa, and even mucous membrane, by saying that coincident with the closure of a main trunk of an artery, the anastomoses are plugged also, thus forming an artificial end-artery. This, however, by no means explains the process in general, and in only one case (Ponfick[7]) is it expressly stated that a part of an embolus of the main trunk of the superior mesenteric artery became loose and was carried to smaller branches.

Litten's experiments lead him to the conclusion that the superior mesenteric artery is a "functional end-artery."[8] His experiments showed that the formation of a mesenteric collateral circulation needed a higher blood pressure than the blood of the body can reach.

Faber[9] says that the infarction is due to back pressure of blood in the portal system, which overcomes and is greater than the pressure in the anastomosing vessels. The reason why the inferior mesenteric artery does not take up the work of the closed superior artery, he explains by saying that it is a smaller vessel and can not suddenly assume the functions of a larger one. Further, after closure of the superior mesenteric artery, the pressure in the superior mesenteric vein necessarily sinks to *nil* immediately. The pressure in the portal system is thus lowered, making the flow from the inferior mesenteric vein easier. It is thus easier for blood in the inferior mesenteric artery to flow by its natural channel.

Though this view does not cover all the points, it has been accepted by most writers as the best one existing. Rosenbach[10] says:

An increase of the blood pressure is not necessary for the establishment of a collateral circulation, for normal blood pressure is sufficient, when the resistance in the capillaries forming the collateral circulation is lowered, that is, when there is compensatory dilatation of them. But this can not occur in an intestine which is contracting violently, as is that part which is infarcted. The intestine is thus in the most unfavorable condition. It is contracted ad maximum, thus narrowing the vessels which serve for the formation of anastomoses. It needs by its contractions more blood than usual for its nourishment. Thus a vicious circle is present, and infarct and stasis of marked degree with intestinal hemorrhages occur.

As exceptions to the general rule, a few cases are found in which the postmortem examination showed that a collateral circulation had been formed.

A case of Karcher[11] showed a plugged superior mesenteric artery, but no dilated, collateral anastomoses. The process was at least two months old. Karcher says that the circulation must have been through the colica sinistra. In the case of Chiene[12] we also have evidence of healing. Here both mesenteric arteries were occluded. The circulation was carried out by the superior hemorrhoidal artery, and the colica dextra and sinistra. The retroperitoneal plexus of arteries was much dilated, and served as union between the internal iliac artery and those of the mesentery. In one of Cohn's cases,[13] a previous infarct of a portion of the transverse colon was found, which was healed by collateral circulation. An embolus had lodged in the ramus colica. Collateral circulation was established by the dilated branches of the pancreatico duodenalis and inferior mesenteric arteries, in a case reported by Virchow.[1] Again, the cases of

3. Ref. in Allbutt's Series, vol. vi, p. 228.
4. Mitt. a. d. Grenzgeb. d. Med u. Chir., vol. v, p. 511.
5. Centralblatt f. d. Grenzgeb. d. Med. u. Chir., vol. v, No. 18, p. 705.
6. Vorlesungen u. allg. Path., vol. i, p. 150, et seq.
7. Virchow's Archiv, vol. l, p. 622.
8. Deutsch. med. Woch., 1880, No. 8.
9. Deutsch. Archiv f. klin. Med., vol. xvi, p. 527.
10. Berl. klin. Woch., 1880, p. 269.
11. Schweizer Correspondenzblt., 1897, No. 18.
12. Jour. Anat. and Physiol., London, 1869, vol. iii, p. 65.
13. Klinik d. Embol. Gefässkrankheiten, p. 548.

Kaufmann[14] show what is to be regarded as partially formed collateral circulation. In one case the ileocolic artery was occluded, but that portion of the colon supplied by it was unaffected. In the other case, with the superior mesenteric artery closed, an anastomosis with the pancreatico-duodenalis was found. On this point Neutra[15] says:

That in just these cases (which out of all the cases are exceptions) collateral circulation could form is explained—besides by the sufficient duration of the process—by an especial condition of the involved vessel system. One can assume that in these individuals the anastomosis between the superior mesenteric artery and the neighboring streams was congenitally richer than the normal. Besides this, one can also assume that in the superior mesenteric artery, before the entrance of sudden occlusion, there was already an impediment of the circulation by some cause (stasis by weak heart, atheroma, emphysema) so that opportunity was offered for a collateral circulation to form, and that then the final embolus did not have its usual severe results.

Of interest here is the case of Robson[16] and that of Roughton.[16] In the first the abdomen was opened for internal hemorrhage, following a wound by a file. The superior mesenteric vein was found bleeding and was tied. In the second, also from trauma, one of the vasa intestini tenuis arteries was ruptured close to its origin from the superior mesenteric artery. It was ligated. In both cases complete recovery resulted.

It is well known that occlusion of mesenteric arteries causes clinical pictures very nearly identical with those following closure of veins, in spite of the differences found from a point of view of pathologic anatomy. It has, therefore, been deemed best by the writers to discuss the cases as a whole, leaving attempts at clinical differentiation for later consideration.

The following twenty-seven cases are new to the literature, and are therefore given in some detail:

CASE 1. (Dr. James Marsh Jackson.)—Man, 65 years. Was always very strong. Served in the Civil War on the coast survey. For twenty years has been resident engineer of a large mine. For several years has had a weak heart, and has been unable to walk upstairs without great discomfort. For a long time has taken laxatives (Carlsbad), more often of late, and in increasing amounts. Now rarely walks more than a block, and even then is obliged to stop for breath. Some years ago had several attacks of angina pectoris. In 1897 had "blood poisoning" of foot from a corn, and was sick for a long time. This was followed by gangrene of the toe and amputation. His family physician has known for several years that patient had diabetes, and what he considered a mitral regurgitation. In January, 1900, the urine contained 7 per cent. of sugar; later only smaller amounts. For past three years has had neuralgia of jaw, for which he has used from 1/20 to 1/10 grain of nitrate of strychnia. Is now taking 1/5 of a grain daily with relief.

Present Illness.—Jan. 4, 1901, patient ate hearty lunch of corned beef, which caused some gastric distress. On the next day the morning movement was constipated. Felt well, however, until January 6, when he ate a breakfast of fish balls and coffee, and had a very small movement following Carlsbad. He had considerable general pain in the abdomen, and lay on the sofa most of the day. Towards night the pain became quite severe, for which he took a large dose of castor oil. The oil operated in about four hours; first movement constipated, next two very loose. After this the pain was slightly relieved, but soon began again and kept him awake most of the night. January 7 the pain still bothered him a great deal, and the abdomen became somewhat distended during the day. January 8, at 1 a. m., the pain became so severe that he could stand it no longer and sent for me.

Physical Examination.—Abdomen distended, especially over the left side; everywhere tympanitic. Very slight general tenderness. Pain constant, dull, with exacerbations all over abdomen, but especially in region of umbilicus. Lungs negative. Systolic murmur at mitral area of heart; aortic second sound not accentuated. Heart otherwise negative. No pyrexia; pulse slightly intermittent. A high enema repeated in an hour had no result. Morphia was then given and he slept through the rest of the night.

January 8, 8 a. m. The enema was repeated without any result. Castor oil was then given, but did not operate. In the evening Dr. F. C. Shattuck saw him in consultation and concurred in the diagnosis of intestinal obstruction of unknown cause; operation not advised. Repeated doses of Seidlitz powders were then given. No movement followed; no gas. At night ¼ gr. morphia was again given. At this time there was moderate distension of the abdomen; general tympanites; no tenderness on pressure. Pain was general over the abdomen, especially marked at the umbilicus. Patient restless, preferring to sit up most of the time. Desires to pass gas but can not.

January 9. Bowels have not moved during the past night. The abdomen is more distended; the pulse is rather poor, and the patient looks rather seedy. Showed considerable improvement after 1/8 gr. of strychnia. In consultation with Dr. J. Collins Warren the condition above described was found. Rectal examination showed a mass the size of a small orange, high up toward the middle line, which felt like an impacted omega loop. No fecal matter in the rectum. A high enema of oil was then given, followed by one of magnesium sulphate, glycerin and water. Three hours later a movement took place, consisting of about two quarts of fecal matter; no blood or mucus. More comfortable after this. Pulse regular and of good volume, but still intermits occasionally. White count: 13,400. Temperature 100, pulse 108, respiration 25. Some thirst.

January 10. Fairly good night. Abdomen still distended. Some belching of gas, no vomiting. Oil and magnesium enemata repeated with two good results. Has taken nourishment every two hours in small amounts. Rather restless all day, complaining of general discomfort in abdomen. At night abdomen seemed harder in right iliac region, and very tympanitic over left iliac and epigastric regions. Color good; respiration rather rapid, but not labored. Slight nausea, but no vomiting. Very thirsty. Has passed no gas and has not much pain. Bowels have moved four times during the day.

January 11. Slept only a short time last night, when he became very restless and complained of considerable pain in epigastrium. Drank freely of water and liquid nourishment. At 3:30 a. m. had a severe pain in epigastrium. Morphia had but little effect. Pulse fairly good. At 7:30 a. m. considerable pain, had pulse, slightly cyanotic, respiration gasping. He responded well to 1/5 gr. of nitroglycerin, and at 9:30 a. m. was quite comfortable. Operation was considered, but given up on account of condition of the patient. At noon he again collapsed and large doses of stimulants were necessary to obtain any reaction. From this time on he gradually failed and died at 3 p. m. Before death he had an involuntary movement and passed gas. After death about two quarts of dark brown fluid, smelling of stomach contents, flowed from mouth and nose. The stomach had evidently not passed anything along for hours.

Analysis of Urine.—Dr. J. Bergen Ogden, Harvard Medical School. Jan. 11, 1901. Urine in 24 hours small, specific gravity 1033½, color high, amount of sediment considerable, reaction strongly acid, chlorids much diminished, urophœin increased, E. phosphates much diminished, indoxyl much increased, alk. phosphates diminished, urea 1.84 per cent., uric acid increased, albumin very slight trace. Sugar present, 3.57 per cent. No acetone or diacetic acid. Bile pigments absent. Sediment, numerous granular and brown granular casts, some with renal cells, abnormal blood and little fat adherent. Numerous free renal cells, and a few blood globules.

14. Virchow's Archiv, vol. cxvi, p. 353.
15. British Med. Jour., 1897.
16. Lancet, 1899.

A few small caudate cells as from renal pelvis. We find this urine to contain sugar. The normal solids are all diminished excepting the uric acid. The indoxyl is very high, which is confirmatory of the diagnosis of intestinal obstruction. The chlorids, phosphates and urea are diminished, probably on account of a low diet. The very low chlorids might also be consistent with a serous effusion. There is considerable disturbance of the kidneys, apparently of the nature of an active hyperemia, rather severe and probably due to a toxemia. There is also evidence of an irritation of the pelvis of the kidney, probably from the same cause. As to the meaning of the sugar, there may have been a diabetes mellitus antedating the present trouble. On the other hand, the sugar may be secondary to the marked abdominal trouble. In the absence of previous history pointing to diabetes, the glycosuria should be considered secondary.

AUTOPSY. DR. W. F. WHITNEY, HARVARD MEDICAL SCHOOL.

Jan. 12, 1901, 18 hours postmortem. The body of a large man with abundant fatty tissue. Rigor mortis present. The body was slightly warm with marked lividity of the dependent portions.

Head.—Not opened.

Pericardium.—Contained a normal amount of fluid.

Heart.—Large. Weighed 400 grams. The valves were normal in appearance. The mitral valve measured 11 cm., and the tricuspid 13 cm. The aorta showed numerous opaque, yellow and calcified patches on its inner surface. The openings of the coronaries were slightly obstructed, and there was a similar condition to that found in the aorta, but less extensive throughout these arteries. The heart substance was pale.

Microscopic Examination.—A slight increase of the fibrous tissue was found between the bundles of muscular fibers, which were somewhat atrophied, otherwise there was nothing remarkable.

Lungs.—Somewhat adherent to the chest cavity and rather engorged in blood in the dependent portions, but otherwise not remarkable.

Abdominal Cavity.—Contained a moderate amount of bloody, serous fluid. The coils of the intestines were very much distended with gas and of a dark, bluish-red color. The stomach itself was normal. The ileum, for the greater part of its course, was discolored, bluish-red in color, the membrane injected with a little bloody mucus in the interior, and about midway in this part the walls were thickened through infiltration of blood. On section the veins leading to this point were found filled with a dark red, loosely adherent antemortem thrombus. The lower two feet of the ileum and the head of the colon were normal. The greater part of the ascending and transverse colon presented a similar aspect to that of the ileum but less in extent. The veins leading to this were also found to be thrombosed in a like manner.

Pancreas.—It was imbedded in fatty tissue, but appeared normal to the eye.

Liver.—Was of normal size. On section it was rather opaque and yellow with indistinct lobular markings. Microscopic examination showed atrophy of the liver columns, slight increase of the fibrous tissue and fatty infiltration of the cells.

Spleen.—Small and soft.

Kidneys.—One of them weighed 200 grams. On section the surface was somewhat pale, slightly opaque with marked injection at the base of the pyramids.

Microscopic Examination.—The vessels of the malpighian bodies were found to be dilated and the connective tissue between the tubules was increased, with a marked atrophy and granular degeneration of the epithelium. The arteries of the kidney were considerably thickened, but this was in general diffuse. In the straight tubules were a few hyaline casts. The thrombosed vessels in the mesentery showed very little change in the wall of the vein that would be regarded as a cause for the thrombosis. In one of the pieces examined, in addition to the vein, a small artery was also found to be thrombosed, the wall of which showed a marked thickening and irregularity of the intima, and to which a thrombosis was very intimately adherent, and seemed as if it might have been the starting point of the process.

Diagnosis.—Arteriosclerosis with hypertrophy of the heart; slight, chronic interstitial myocarditis; hepatitis and nephritis; thrombosis of the mesenteric vein and artery; infarction of the intestine; commencing gangrene.

It is to be regretted that the pancreas was not examined microscopically in this case, and that a thorough dissection of the mesenteric vessels could not have been made. It is, however, fair to assume that the thrombosis could not have extended further than the secondary branches, otherwise the entire intestinal tract would have been infarcted, which is shown above was not the case. It is probable that the thrombosis was due to mechanical pressure of the overloaded colon on vessels in which the circulation was deficient from conditions of the walls of the vessels and the heart.

CASE 2 (Dr. Gannett).—A. R., woman, 65 years, entered Massachusetts General Hospital May 18, 1902.

Family History.—One sister has myxedema, one brother and sister died of tuberculosis.

Past History.—Scarlet fever and measles as child. For eight to ten years has been treated for heart trouble.

Present Illness.—Has been failing gradually for four to five years, and is troubled with dyspnea and palpitation. Has had several severe attacks of orthopnea in last few years. Her present attack has lasted six to eight months, but she did not stay in bed all the time. At times has attacks of severe precordial pain, bearing no relation to exertion. For one or two months legs have been swollen, the swelling gradually increasing and extending upward. No swelling of face and hands. Appetite fair. Vomits occasionally, but only after coughing. Bowels regular. Temperature 98.6, pulse 80, respiration 40.

Physical Examination.—Well developed and nourished. Complains of precordial distress. Cheyne-Stokes respiration. Lungs, râles at both bases, otherwise negative. Heart, apex, fifth space six and one-half inches from middle line. Enlarged, sounds distant and feeble. Systolic murmur at apex. At third left interspace a long, loud diastolic murmur. Pulmonary second sound increased. Pulse regular, small volume, rather high tension, arterial walls thickened. Abdomen large, lax, much subcutaneous fat, with marked dullness on percussion, extending well up into flank, dullness shifting with change of position. No tenderness, nothing abnormal felt. Very marked edema of thighs, legs and feet. Reflexes normal. Blood, hemoglobin 90 per cent., whites 13,000. Urine, high color, acid 1,023. Albumin, slightest possible trace; sugar absent, chlorids diminished, urea 2.77 per cent.; sediment shows very rare hyaline cast and abnormal blood globule; considerable blood, and some squamous cells; many bacteria.

Clinical Diagnosis.—Hypertrophy and dilatation of heart, arteriosclerosis, failure of compensation.

May 21. Considerable improvement in pulse since entrance, but has much distress at times with breathing. Is very noisy.

May 23. Pulse and general condition remain about the same. Still considerable dyspnea, but not so marked as at entrance. Incontinence of urine and feces. Edema of legs and abdomen is increasing.

May 25. Considerable hematemesis is present.

May 26. General condition not so good. Râles more numerous. During afternoon became unconscious, and failed rapidly. Died 6:15 p. m. Temperature never went above normal, pulse gradually increased to 110.

AUTOPSY. DR. J. H. WRIGHT.

Arteriosclerosis with slight dilatation of aorta. Hypertrophy and dilatation of heart. Thrombus in right auricular appendix of heart. Embolic thrombus of branches of pulmonary artery in each lung, with hemorrhagic infarcts of lungs. Stenosis of celiac axis, and superior mesenteric artery at their origin. Obturating thrombus of the superior mesenteric artery. Chronic, passive congestion of lungs, spleen, liver and

intestines. Double hydrothorax. Anasarca. Senile degeneration of kidneys and uterus. Chronic perisalpingitis and pericephoritis. Adenoma of left adrenal. Chronic perisplenitis. Obsolete tuberculosis of pleura. Right otitis media, umbilical hernia. Cholelithiasis. A very few cc. of fluid in pelvic cavity. A small piece of omentum adherent to the abdominal wall, in the region of the umbilicus. Anterior margin of right lobe of liver, two fingers' breadth below costal margin in mammillary line. The mucosa of small intestine shows injection of small vessels, and in places the valvulæ conniventes are of a dark red, hemorrhagic appearance. No ulcers. Abdominal cavity and intestines otherwise negative.

CASE 3 (Dr. J. J. Minot).—E. H., widow, 68 years, entered Long Island Hospital, Nov. 10, 1903.

Previous History.—General weakness, with nausea and vomiting.

Physical Examination.—Well developed, slightly emaciated. Somewhat weak, answers slowly but rationally. Anemic. Left pupil slightly larger than right, reaction normal. Tongue is protruded, straight, somewhat dry and coated. Pulse irregular, slightly rapid, of fair volume and tension. Arteries excessively calcified. Chest expansion fair. Heart sounds weak, no murmurs heard. Lungs, good resonance throughout, moist râles in both lower backs. Abdomen, lax and tympanitic, no tenderness or tumors. Liver and spleen normal, not palpated. Extremities, knee-jerks and plantars present. Patient is able to move left leg and arm but slightly, and with less strength than on right.

Clinical Diagnosis.—Myocarditis, arteriosclerosis, interstitial nephritis, rheumatoid arthritis.

Nov. 11, 1903. Patient slept well during the night, and this morning was comfortable. About five minutes after she had been talking with the nurse in her usual manner, she suddenly became pulseless and white, and vomited a large amount of thin, dark fluid, filled with dark, membranous material, varying from small fragments to 2 cm. in diameter. Artificial respiration was of no avail, and patient died.

Examination of urine, specific gravity, 1,023 acid, very slight trace of albumin, sugar absent, bile absent. Several squamous cells, occasional hyaline and granular casts.

Examination of vomitus. Dark brown liquid. Lactic acid and blood present.

AUTOPSY. DR. G. B. MAGRATH.

Anatomic Diagnosis.—Chronic adhesive pleuritis, chronic adhesive pericarditis, hypertrophy and dilatation of heart, emphysema of lungs, fatty metamorphosis of liver, chronic nephritis, multiple infarcts of ileum, senile endometritis, mural thrombus of aorta, general arteriosclerosis, edema of brain, acute fibrinous pericarditis, double hallux valgus. Several coils of the lower part of the ileum are united to one another by fresh, fibrinous adhesions. The coils at the site of the adhesions injected, dark red, and marked by opaque, white patches. The mesentery at the site of these areas is thickened, on section, edematous, the cut surface yielding on pressure, in addition, puriform fluid. These coils lie in the pelvis. Vermiform appendix, and mesenteric lymph nodes normal. On section, the above coils show considerable loss of substance, involving the mucous membrane, the area extending completely around the intestine. Color, opaque, yellowish brown. In places, partly detached sloughs are present, about 2 cm. in width; 30 cm. of gut are involved in lower one-third of ileum.

Aorta on section shows some general dilatation; circumference at the left subclavian, 7.5 cm.; the inner surface is marked by numerous indentations, alternating with elevations, the former calcareous and shell-like, the latter white, or yellowish white; 7 cm. above the celiac axis the front wall shows two regions, approximately 1 cm. in diameter, overlaid with adherent, gray-red clots. One of these clots is somewhat sessile; the lower part of the abdominal aorta and the common iliac are almost wholly calcified.

Microscopic examination shows arteries of involved gut occluded by arteriosclerotic thickening, with few thrombi in finest branches.

CASE 4 (Dr. R. H. Fitz).—B. J., 54 years, widow, cigar maker. Entered Massachusetts General Hospital, Jan. 24, 1903.

Previous History.—Pleurisy three years ago, no other illness. Has had 11 children, youngest 15 years ago; one miscarriage before last child was born. Menopause 4 years ago. Tea, two cups per day. Seldom takes alcoholic liquor.

Present Illness.—Two weeks ago, while in bed in the morning, patient was awakened by pain in the right hypochondrium, of considerable severity, dull and heavy in character, not radiating. A few minutes later she vomited, and continued to vomit all the forenoon, with gradually diminishing frequency. Vomitus was slight in amount, green and bitter. There was no chill or feverishness. Pain could not be traced to anything unusual in diet. Bowels had been regular. After this attack, patient felt well until six days later, when a second attack of pain and vomiting occurred. This time the pain did not disappear, but has continued with greater or less severity up to the present time (kept her awake all last night, but is better to-day.) Has vomited almost every day this week (to-day at least 10 times). Has been able to retain but very little nourishment. She has felt cold most of the time, but has noticed no feverishness. Has noticed no jaundice. Bowels have only moved twice in last week, nothing abnormal noticed in character of stools. Urine is red and "thick" and burns as she passes it. Sleep has been poor on account of pain. No appetite.

Physical Examination.—Well developed, somewhat obese. Skin and mucous membrane of good color. Pupils equal and react. Teeth, upper false, many lower ones wanting. Tongue moist, with slight white coat. Throat negative, lungs negative. Heart, apex palpable, fifth space, 4¼ inches from median line. Right border dullness 1½ inches to right of median line. Sounds very irregular in force and rhythm. Pulmonic second sound slightly increased. No murmurs. Pulse very irregular, rather small volume, and low tension. Abdomen, large, flabby, tympanitic. In the right lower quadrant there is marked tenderness and resistance to palpation, most marked midway between umbilicus and anterior superior spine of right ilium. In the lower abdomen is felt a mass, tender on palpation, and elongated in transverse diameter. No tenderness or spasm in region of gall bladder. Liver dullness from sixth rib to one inch above costal margin, edge not felt. Spleen negative. Reflexes normal. Slight edema of ankles. Temperature 102, pulse 90, respiration 25.

Diagnosis.—Acute endocarditis.

January 24. Blood, hemoglobin 90 per cent., whites 20,200.

January 25. Urine high color, acid 1,030; albumin, large trace; no sugar, no bile, no diazo. Chlorids diminished, urea 3.03 per cent. Sediment, few hyaline casts, with renal cells, and oil globules adherent, many fine and coarse granular casts, some with renal cells adherent. Rare compound granule cell. Numerous squamous epithelial cells. Few leucocytes and small round cells. No blood seen.

January 26. Whites 28,400. Marked iodophilia.

January 27. Patient has grown steadily worse since entrance. Temperature increased and rising, and pulse steadily rising. Complained of abdominal pain, but for the last twenty-four hours has been semi-conscious. Abdomen, though soft, is generally tender. Cheyne-Stokes respiration. Heart action very irregular in force and rhythm. Died, 6:35 on January 27.

AUTOPSY. DR. J. H. WRIGHT.

Anatomic Diagnosis.—Fibrous endocarditis of mitral valve (mitral stenosis). Fibrous endocarditis of aortic and tricuspid valves. Hypertrophy and dilatation of the heart. Thrombi in the left auricular appendix. Embolism and thrombosis of branches of the superior mesenteric artery, with hemorrhagic infarction of the cecum and portions of the ileum and ascending colon. Infarcts in the spleen and kidneys. Thrombosis of a large branch of the superior mesenteric vein. Meckel's diverticulum. Cholelithiasis. General peritonitis.

Icterus, especially of anterior portions of trunk. Head not examined. Small amount of opaque fluid in peritoneal cavity, with grayish yellow flocculi. The coils of the intestine generally show marked injection of the serosa, and at their margins of contact present grayish yellow streaks of fibrinous exudate.

Cover-glass specimen from this exudate shows many leucocytes, and innumerable bacteria, among which are bacilli and micrococci. The walls of the cecum and one-half the adjoining ascending colon, and over a distance of 100 cm. of ileum, show marked changes in color. In the situation of the portion of the ascending colon mentioned, the cecum and lower part of the ileum are black to black-red in color and gangrenous in appearance. Higher up the color fades out gradually from the blacker, gangrenous appearing condition of the lower portion, to the normal appearing intestine, about 100 cm. from the ileocecal valve. The change in color varies from the black-red of the lower portion to gray-red, and beyond the distance mentioned to the normal color. The parietal and visceral peritoneum present more or less of a grayish fibrinous exudate in places. Lungs, no adhesions, negative. Pericardium negative. Heart, old endocarditis of mitral aortic and tricuspid valves. Aorta, negative.

Superior mesenteric artery: At point where ileocolic branch is given off, is an occluding, gray-red, fleshy mass, which is slightly adherent at one point to the intima. This mass is continued into the ileocolic branch, and its branches as gray-red to blackish-red masses, and on following out two or three of the larger branches of the ileocolic it is seen to be continuous in them, till they disappear in the gangrenous portions of the ileum and cecum. In a large radicle of the superior mesenteric vein of the portal system, which arises from the region of the cecum and the ileum, there is, in its lumen, over a distance of several centimeters, a gray-red thrombus-like mass occluding it. This material is invested by a grayish-red, membranous-like covering, and on section shows rather blackish-red, slightly soft central portions, with somewhat denser, gray-red peripheral portion. Liver, negative. Gall bladder, spleen, kidney, etc., as above. No ulcerations in intestines on section, and except for gangrenous portions already described, they are not remarkable. Appendix negative.

There is given off in the ileum, at a point about 90 cm. from the ileocecal valve, a diverticulum 5 cm. long by 2 to 3 cm. wide, the lumen and mucosa of which are continuous with those of the intestines.

CASE 5 (Dr. Fitz).—J. K., man, 25 years, entered the Massachusetts General Hospital Dec. 16, 1898.

Clinical Diagnosis.—Gastric ulcer. Secondary anemia. Hematemesis and melena. Picture that of cirrhosis with ascites. Gradual loss of strength, and death with subnormal temperature.

AUTOPSY.

Thrombosis of portal, superior mesenteric, and splenic veins, and of some of the radicles. General anemia. Superficial ulceration in mucosa of stomach. Perisplenitis. Hyperplasia of spleen. Old pleural adhesions. Fatty degeneration of heart. Edema pia. Peritoneal cavity, slight amount clear fluid. Intestines smooth, shiny and pale. Heart not remarkable. Liver small. In portal vein, pink, firm, fleshy mass, adherent to wall, which extends up to where the vein breaks into liver branches. The thrombus divides and extends slightly into the liver. At origin of portal vein the thrombus divides and extends along the splenic and superior mesenteric vein. In this latter the thrombus can be easily traced down into some of the finer radicles in the mesenteric insertion of the intestine. The character of the thrombi change in the smaller vessels to a gray-red, firm, fibrinous material, adherent to the wall, with intervals of a darker red, soft blood clot material. The splenic vein presents a similar condition to the superior mesenteric, near the end of the superior mesenteric vein, a calcareous plate, size of finger nail. Intestines show some reddening of mucosa. Stomach on section, horse-shoe shaped, superficial loss of substance near pylorus.

The following four cases are from the Johns Hopkins Hospital, Baltimore, and are published by the courtesy of Dr. J. C. Bloodgood:

CASE 6 (reported by Dr. Bloodgood). C. C., male, age 52, engineer.

Past History.—Had been a soldier.

Present Illness.—Three weeks ago sudden abdominal pain, not very severe in character, associated with vomiting. Since then intervals of moderately severe pain, chiefly in umbilical region, and vomiting. A few days before admission, acute abdominal pain in region of umbilicus, with vomiting. This attack was aggravated by the administration of cathartics on the next day. No passage of fecal matter, blood or flatus, from this time, three days before admission. Nothing retained by stomach. Abdomen slightly tender above and to right of umbilicus and moderately distended. On admission to the surgical wards at Johns Hopkins Hospital, Sept. 15, 1898, examination showed patient to be excessively fat. Temperature 100 degrees, pulse 72, respiration 24. Facies typical of a severe, intraperitoneal lesion. Abdomen moderately distended, slight muscle spasm, but no tenderness. Palpation difficult, on account of thick abdominal walls. No mass detected on palpation. Rectal examination negative, no fecal matter in rectum. Prepared for operation at once.

OPERATION.

Laparotomy September 15, by Dr. Bloodgood. Under ether anesthesia, a large moveable mass was felt slightly to right and above umbilicus. Bloody fluid in peritoneal cavity, no fecal odor. The moveable mass proved to be omentum adherent to coils of small intestine beneath it. The mass was excised. About 8 cm. of a loop of ileum was gangrenous; the neighboring intestine was congested and covered with fibrin. No perforation. No fecal extravasation. The mesentery seemed normal. The omentum and mesentery very large from fatty deposit; intestine not greatly distended. The gangrenous loop of intestine was drawn out of the wound, and the intestine grained by tubes, inserted above and below. The operation lasted one hour, transfusion of salt solution (1 liter) at end.

After operation patient vomited a great deal of bile-stained fluid. This vomiting continued intermittently during the next three days.

September 17. Gangrenous intestinal loop came away from wound, without bleeding. Temperature 100.5. Pulse, 120. Pulse became very weak during night and rose to 160.

September 18. Temperature 103. Death 10:30 a. m.

AUTOPSY SEPTEMBER 18. DR. FLEXNER.

Anatomic Diagnosis.—Thrombosis of mesenteric veins, necrosis and gangrene of small intestine, general fibrino-purulent peritonitis. Abscess in omentum. Operation wound. Extension of venous thrombosis in portal vein. Congestion of liver and spleen. Chronic, diffuse peritonitis. Chronic interstitial orchitis. Hydrocele. The jejunal loops within the abdominal cavity were much dilated, dark in color, and contained much fluid. The ileal loops were much less distended, the large intestine moderately distended. The gangrenous loops involve the lower end of the jejunum, and the beginning of the ileum. The jejunum adjoining the gangrenous portion very dark in color. The superior mesenteric artery was free. The superior mesenteric vein and its branches to the gangrenous loop and to the intestine on either side were occluded by firm, partially adherent thrombi. The main trunk of the portal vein was also filled by firm thrombi extending from that in the mesenteric vein.

CASE 7 (reported by Dr. Mitchell).—G. W., male, age 41, saloonkeeper. Patient was admitted to the Johns Hopkins Hospital as an emergency case July 18, 1900. Had been suffering severely for four days with agonizing pain just to the left of the umbilicus. Considerable nausea and vomiting for last 36 hours. No movement of bowels for two days before admission.

On admission, condition very alarming. Temperature 102 degrees, pulse 140, fair volume. Respiration 31 to minute, thoracic. Skin bathed in perspiration. Lips and mucous membranes pale. Abdomen uniformly distended, tender on pressure, especially on right side. Liver dullness obliterated in upper line. Left side of abdomen tympanitic on percussion, dullness over right lower abdomen, extending nearly to median line. Palpation not possible because of tenderness. Below umbilicus there was a prominence visible in the median line. No visible peristalsis. The general aspect of the man strongly suggested a severe internal hemorrhage. Dr. Mitchell made

the diagnosis of mesenteric thrombosis and immediate operation was advised.

OPERATION.

Laparotomy 12:40 p. m., July 18, by Dr. Mitchell, under cocain and chloroform anesthesia. The peritoneal cavity was found to contain a large quantity of thin, dark brown, bloody fluid. A large distended blue-black coil of small intestine was found, running transversely above the umbilicus, down right side of abdomen and across below umbilicus. Above this was distended, and below it, collapsed intestine. The loop was brought out of the incision, and on incising the mesentery the veins bled very dark, black blood; the arteries did not bleed. The exact location of loop was not made out. The mesenteric glands were much enlarged. The adjacent mesentery very black in color and much thickened. The mesentery was tied off with heavy silk and divided. The abdomen was partly closed with silver sutures. The intestine was then divided well back of gangrenous portion and the distal and proximal ends brought through wound and packed off with iodoform gauze. No attempt was made to wash out the general peritoneal cavity.

Cultures from the peritoneal cavity were sterile; *Bacillus coli communis* was obtained from resected intestine. Patient did not stand operation well and did not rally from it. Condition gradually grew worse and death occurred at 9 p. m., seven hours after operation. Two large involuntary stools were passed before death.

No autopsy was permitted.

In looking through the Autopsy Reports of the Johns Hopkins Hospital, in all our 1,600 cases we have found 4 cases in which hemorrhagic infarction of the intestine have occurred without being suspected in life. One of these cases has already been reported by Dr. Welch and Dr. Flexner. A second was in a case of splenomegaly, with a gas-bacillus infection. This was an outside autopsy, and as there was no clinical history it was not reported in detail. There was thrombosis of the portal, splenic and mesenteric veins. Through the courtesy of Dr. Osler, in whose service the remaining two cases were while in the hospital, we are able to give the details of their clinical histories, which, with the pathologic findings, are of interest in the study of mesenteric thrombosis as a terminal process.

(To be continued.)

THE MANAGEMENT OF SOME FORMS OF ASTHMA.*

THOMAS F. REILLY, M.D.
NEW YORK CITY.

Brügelman of Wiesbaden has had under his care 2,130 cases of asthma and believes that the symptom asthma in all of his cases was due essentially to some disturbance of the central nervous system which is set up by one of three sets of general causes. (1) Traumatic, involving some injury to the brain or medulla. (2) Toxic asthma, due to toxic conditions of the blood as uremia, diabetes mellitus, etc.; under this term he includes cardiac asthma. (3) Reflective, such cases as are due to reflex irritation, particularly involving the air tract. Out of his 2,130 cases he found 7 that were due to cerebral traumatism and 222 that could be referred to toxic conditions. All of the remainder, amounting to 1,900, were due to reflex irritation of some kind. Of this number 665 were referable to the so-called nasal points, and 464 to similar points in the pharynx.

These asthmagenous points, as he calls them, are areas of mucous membrane, the irritation of which by contact or by edema is often followed by a paroxysm of asthma, the physiology being that of reflex action possibly through the nasal and pneumogastric nerves. The most frequent location of the nasal point was found to be where the ethnoid nerve lies nearest the surface. This is generally at the junction of the bony and cartilaginous parts of the nose.

Whether we agree with all this or not matters little. Certain it is that the only agents, with the exception of the profound narcotics, that have any reputation for controlling this condition, are such as act either by drying or relaxing the nasal mucous membrane. There is seldom or never any decided relief from the administration of iodid of potassium unless there is a mild coryza accompanying its use. The stramonium salts dry the nasal chambers and all of the various snuffs and inhalations in one way or other accomplish the same result.

The experience of the rhinologists in the main confirm the views above stated. In a paper read before the Illinois State Medical Society Farrell of Chicago reported a number of cases of asthma treated by removal of the offending areas with curative results, and he expressed the opinion that most cases are so benefited. Other rhinologists claim benefit in 75 per cent. of the cases treated with this object in view. Personally I have seen at least half a dozen patients who were operated on by various rhinologists with marked relief so far as the asthma paroxysm was concerned. They consisted for the most part of cases of contact pressure between the middle turbinate and septum. Understand I do not believe in wholesale operative interference in all asthmatics. It is only in selected cases where it does good.

Late last fall there came under my care a series of several cases of asthma. These were not cases of hay asthma, but were of the ordinary type of asthma. It occurred to me that by the use of the suprarenal extract the contact surfaces in the nose, if such were present, would be separated at least for a few hours. Acting on this idea, I applied the solution by means of spray and cotton tampon to the nasal chambers, and the results were eminently satisfactory.

The first case was that of a man who had been suffering from almost continuous labored breathing with acute paroxysms, for nearly three weeks. I applied the solution as stated and followed with the ordinary iodin and glycerin solution, commonly applied for hypertrophic rhinitis. The relief was immediate and he at once exclaimed: "That is the first time in three weeks that I could breathe satisfactorily." The whistling and noisy breathing seemed to stop as if by magic. He was directed to use the suprarenal spray every three hours, and did not have a recurrence of the trouble and has since been well. Since then I have employed this treatment in ten cases with relief in all but two instances. There are undoubtedly many cases in which it will not do any good, but it can do no harm under any circumstances, and at least it is certainly more logical than pouring medicines and opiates into the patient's stomach in the vague hope that they will in some way or other influence the trouble.

Many of these attacks seem to bear a direct relation to disturbances of one kind or other in the gastrointestinal tract. Whether this disturbance is the indirect cause of a swelling of the nasal mucous membrane I leave to the rhinologists to determine. Certainly careful dieting will keep some people free from the attack. In others the use of a simple hydrochloric acid mixture seems to answer. Many other agents are thought to be of occasional service, and it would take the remainder of the evening to enumerate them. The paucity of in-

* Read before the New York County Medical Association.

formation on this subject in the modern text-books is my reason for bringing up this matter of the nasal origin. The routine prescriptions of any hospital or dispensary formulary will convince anyone that a shotgun prescription is generally given to such sufferers.

On the other hand, in private practice in the presence of an acute attack one is the possessor of a vast amount of moral courage, if he can do else than administer a hypodermic of morphia. It is well to remember that all of these patients have a neurotic substratum, and such people may very easily contract the morphin habit. Undoubtedly the hypodermic must oftentimes be given, but it is at least no harm to try the suprarenal spray first, and if relief does not follow in five or ten minutes the morphin can be administered if it be necessary.

THE PROBLEMS OF THE TECHNIC OF URETERAL CATHETERIZATION.

GUSTAV KOLISCHER, M.D.
AND
LOUIS E. SCHMIDT, M.D.
CHICAGO.

While the rapid development of kidney and ureteral surgery in recent years has put ever-increasing demands on refined diagnosis, it is remarkable that one of the most necessary and expedient means for this aim, ureteral catheterization, did not become popular among the surgeons. Surely, to a great extent, this was due to the lack of a complete and authoritative treatise concerning the appropriate instruments and to the absence of a practical discussion and minute explanation of the technic. There is a large number of surgeons who, though anxious to catheterize ureters, still have neither the time nor the material nor the intention to work through all the failures, mistakes and disagreeable experiences connected with the adoption of a rather new and peculiar instrumentation. Others, after studying the pertinent literature, are disappointed because in actual application they find out that a great many of the instructions laid down are either not explicit enough, or faulty, or are simply advertisements for certain obsolete or inadequate instruments. The tireless ambition of some authors to be mentioned as pioneers in new methods produces so-called original articles on endovesical operations, ureteral catheterization and so on, which, through their authors' inexperience, represent nothing else but the reproduction of half-digested and misinterpreted remarks made by experts, or, at best, conclusions based on the fact that the author was made half-way familiar with one, and only one, method. Happy on account of having chanced occasionally into a ureteral opening, with unconscious self-criticism he will praise the method which was demonstrated to him as the only correct one and so on. For a broad discussion of ureteral catheterization it is necessary to be thoroughly familiar with cystoscopy in general and to have had experience with the different instruments and methods on various patients with different sensitiveness, different conditions of the bladder, and under different circumstances.

This paper is intended to give the results of our experience in ureteral catheterization. It was gained by carefully studying the methods used in Europe and in this country and by testing all the different instruments and methods during a number of years on a large amount of material.

The instruments at our services at the present time must be criticised according to the demands made on them. The best instrument is the one which least annoys the patient, while giving the greatest guarantee for finding ureteral openings and catheterizing them, and also being of easy management in the hands of capable surgeons. Such an instrument should answer these purposes both in the male and the female. Last but not least, such an instrument, if possible, should allow catheterization of both ureters with one introduction of the instrument and should permit of leaving the catheters in place after the cystoscope has been removed.

It is first necessary to discuss the various principles on which the instruments are built so as to reach by elimination the most desirable ones. Cystoscopy is accomplished by dilating the bladder either with air or with a transparent fluid, usually water.

All instruments working with the principle of air dilation show the following undesirable features. Distention with air necessitates either an uncomfortable position for the patient, or the maintenance of the dilation by constant pumping, which leads to an irritation of the bladder wall. In this latter form of air dilation, in order to keep the field of view clear, it is necessary to remove the cystoscopic window frequently and to dry the bladder by swabbing. If a large quantity of urine collects, a straight catheter with bulb attachment, to remove the urine by suction, must be used, and then the remaining drops swabbed and the surface dried in order to permit a careful search for the ureteral openings. If the surface is not kept dry, light reflexes, caused by the urine present, are disturbing to every one, even the most expert. This frequent swabbing is easily productive of traumatism and pain; either or both are sufficient to interrupt the procedure.

In the former method of air distention the patient is put in the knee-chest or in the Trendelenburg position, so that the negative pressure in the bladder cavity produces the distention after the introduction of a tube or catheter cystoscope to permit the inrush of air. This position is objectionable for many reasons, such as pain to the patient; refined and sensitive patients will not permit it. Anesthesia may be used for this position in order to overcome some of the objections.

In both these methods of air distention an assistant is almost indispensable. This is a disadvantage when a simpler method is at hand.

These instruments are of a large caliber and hence often torture the patient or call for the use of cocain, the dangers of which, although very well known, still do not seem to impress a great many operators who will still expose the life of their patients in order to make an examination. For both the Lewis and Ellsner instruments, for instance, a cocain tablet carrier is recommended in the description of the technic by the authors. The advice to cocainize every male individual and in some instances the female urethra and bladder, at once admits that the operators know that otherwise the instrumentation will be very painful. The authors themselves recommend this cocainization as a routine preliminary procedure; hence we maintain that the air distention necessitates instruments of unusual size and shape, and in a large number of cases requires an unnecessarily long duration of time for ureteral catheterization. In this class of cases a head mirror is used to throw the light through the tube into the viscus. However, improvements in the way of

introducing the light into the viscus have been added in order to make this method easier.

The field of view in these instruments is a very small one on account of the absence of a lens system, so that locating the ureteral openings usually requires a long search. All assertions to the contrary lead more to doubting the reliability of the reports than to change the expressed opinion which is based on a thorough trial of these instruments and on numerous observations of the work of others. The same holds good in regard to the Pawlik-Kelly method in females. This method lost its right to existence since instruments are placed at the command of the profession that allow of a far superior examination without placing the patient in a disagreeable position, without necessitating dilation of the urethra and without exposing the patient to the dangers of general or local anesthesia.

Having excluded the above discussed group of instruments it remains to consider the features and possibilities of the other cystoscopes which are all built on the two principles laid down by Nitze: introduction of the source of light into the viscus, and the enlarging of the field of view by an appropriate lens system. Experience has proven that the most satisfactory results in cystoscopy are always achieved by dilating the bladder with sterile water or another transparent sterile fluid. Casper recommends 1 to 5,000 solution of oxycyanate of mercury.

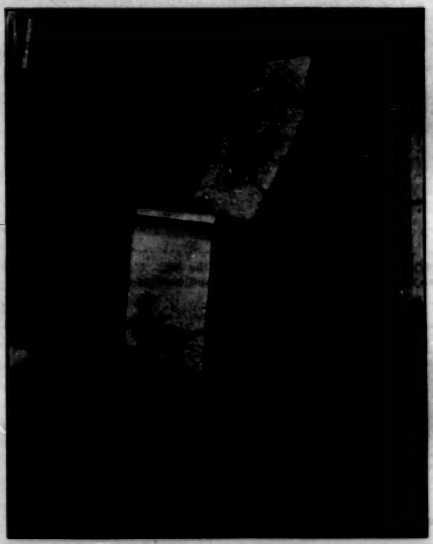

Fig. 1.—Chair for cystoscopy.

Catheters and cystoscopes are lubricated with pure glycerin or any sterile lubricant that readily dissolves in water, so that the lamp and the window are rapidly cleared after insertion. Casper recommends the following composition for lubrication:

B. Hg. oxycyanati		2gtt
Glycerini purl		20
Tragacanthi		3
Aquæ destil. sterili		100

In the case of an infected bladder the viscus is first flushed with a non-irritating silver solution, and this same procedure is repeated after the completion of the examination by the cystoscope.

Before withdrawing the ureteral catheters a few drops of a non-irritating silver solution (such as 1 to 1000 protargol or 1 to 500 argyrol solution) are instillated into the ureters.

The bladder is to be filled as full as possible with the sterile water or other transparent fluid, without causing the patient pronounced discomfort. There is no set quantity suitable for all cases. Thus we smooth, as much as possible, all folds and recesses and flatten out the trigonum; then we gain sufficient space for free movements and manipulations of the cystoscopic beak, although a certain loss of water by dribbling through the conducting canal is unavoidable during the inserting of the catheters, change of tubes and so on.

A very important feature of the whole procedure is the posture and position of the patient. Although it is possible for the very experienced examiner to catheterize a ureter in almost any position, one should always endeavor to succeed in a position which is least disconcerting to the patient and most advantageous for the operator. We prefer having the patient in a sitting posture on a chair which is high enough to permit free manipulations without forcing the operator into a crouching position, which soon becomes tiresome and interferes with steady work. The seat of the chair is slightly elevated, so that the pelvis of the patient is somewhat raised. It is very important not to have the hip joints too forcibly flexed. It is apparent that if the knees are forced above the seat that the inclination of the pelvis disappears entirely and consequently the trigonum will be brought in an unfavorable angle for inspection (Fig. 1).

Fig. 2.—Patient in reclining posture for collecting urine through the ureteral catheters. Catheters running over elevated plane, dipping into glasses.

If after completed catheterization the intention is to leave one or both catheters in place for some time in order to collect urine, the patient's legs, after the removal of the cystoscope, are relieved from the stirrups, the foot end of the chair is raised and the patient is kept in a recumbent position. It is our practice to lead the ureteral catheters to their distal ends over an inclined plane that is carried by an adjustable stand.

In this way we avoid contamination of the collected urine through fluid coming out of the bladder that might run alongside the outer surface of the catheters. Fig. 2 shows all that clearly without further explanation.

We consider the small caliber of the instrument which we are using a distinct advantage. In the majority of cases it is absolutely unnecessary to resort to any local anesthetic. The application of cocain into the posterior urethra or into the bladder is always undertaken at a certain risk, because we have no means of gauging the idiosyncrasy for cocain or of counteracting an intense cocain poisoning.

In very sensitive patients we insert a morphin suppository into the rectum, ten minutes previous to the examination. This local morphin anesthesia furnishes another advantage over cocainization. The most disagreeable sensation is caused not by the contact of the instrument with the mucosa, but by the stretching of the parts. This disagreeable sensation is better dulled by morphin than by cocain. It remains to be seen whether the combined scopolamin-morphin narcosis might be used to advantage in cystoscopy. Often one succeeds in obtunding the sensibility of the posterior urethra and of the bladder by injecting a 4 per cent. antipyrin solution; it takes, however, about ten minutes before the anesthetizing effect occurs. Occasionally patients will develop a typical antipyrin rash after the application.

General anesthesia is required only in exceptional and extreme cases. In such cases it must be complete and deep, so as to prevent forcible contractions of the bladder, which might lead to rupture if the bladder is distended.

Under certain conditions in female patients we have to resort to a few special maneuvers in order to facilitate catheterization of the ureters. If we consider that a part of the fundus of the bladder is in close connection with the cervix, and that the trigonum rests on the anterior wall of the anterior fornix vaginæ, it is easily understood that dislocations of these parts will considerably interfere with the topographic situation of the trigonum. So far as the position of the cystoscope is concerned, the technical situation will simmer down to answering the question whether the trigonum is dislocated upward or pulled down toward the symphysis. In the former case the funnel or outer end of the instrument has to be lowered considerably, while in the latter case the funnel has to be elevated so that the whole instrument gets to be in rather a steep position. If a descensus or prolapsus exist it may become necessary to reconstruct a normal condition by packing the vagina more or less tightly after having replaced the parts. Once in a while it is important to catheterize the ureters in cases of vesicovaginal fistula, so as to get information as to the relation of the ureteral ampulla to the cicatricial tissues. If the fistula is rather small and its edges movable, we close the fistulas with small clamps, and in case of rigidity of the edges the vagina is packed tightly with wet absorbent cotton so as to prevent leakage for a considerable time, and to allow sufficient distention of the bladder.

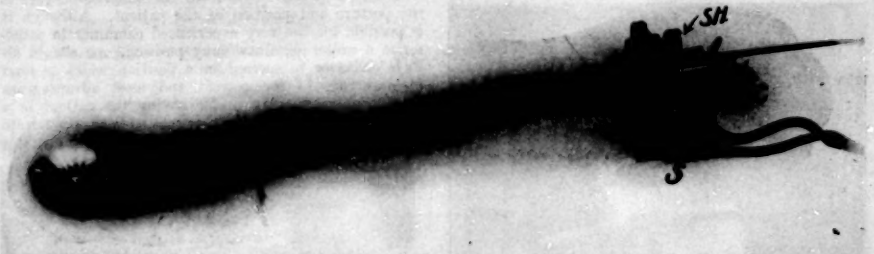

Fig. 3.—Casper's lastest cystoscope for ureteral catheterism. W. Window. S. Screw for fastening the lid. L. Lever for moving the shover. SH. Shover. OC. Ocular. The ureteral catheter is introduced into the conducting canal and protrudes at both ends.

Fig. 4.—Nitze-Albarran single-barreled ureteral cystoscope. W. Window. L. Lever. Upper S. Screw for fixation. Lower S. Screw for directing the lever. C. Canal for catheter. OC. Ocular.

The finding of the ureteral openings may be very difficult on account of inflammatory changes in the mucosa, as the whole trigonum becomes raw and covered in some instances with all kinds of fossetæ and recesses. In some cases we still succeed in discovering the ureteral openings by watching for the urinary whirl. We may be aided in this endeavor by coloring the urinary stream; best by subcutaneous administration of indigocarmin. But this watching for the urinary whirl is extremely tiresome for the eye because quite often the activity of the kidneys is entirely suppressed for a short period during cystoscopy. In some cases, in the female, we succeed by inserting a finger into the vagina and

lifting up the anterior wall of the fornix so that the trigonum is brought very close to the cystoscopic window. Thus we are able to ascertain whether a certain recess is only a blind one or whether at its bottom the ureteral opening is to be found.

One may succeed in difficult cases in making more prominent the trigonum, the intraureteral ligament and the ureteral openings, by seizing the dome of the anterior vaginal fornix with a vulsellum and by pulling down the fornix.

A similar procedure as above mentioned may be used if the ureteral openings in the male are situated on the posterior side of a prostatic elevation. Quite often dition is regularly found after the application of segregators.

If the inflammatory changes are very pronounced, so as to prohibit the distention of the bladder to a sufficient extent, or, that on account of the condition of the trigonum it should be impossible to discover the ureteral openings, or if both these conditions are present at the same time, cystoscopy and ureteral catheterization has to be postponed until appropriate treatment has succeeded in improving the mucosa.

The cystoscopes for ureteral catheterization naturally divide themselves into those furnishing a direct or an indirect inverted view of the examined area.

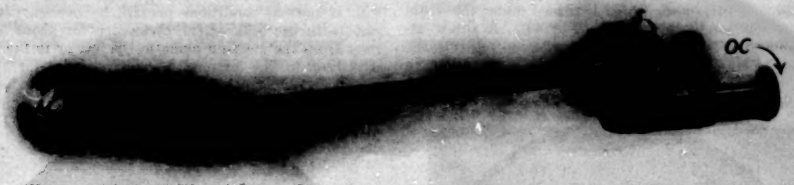

Fig. 5.—Schiffin's modification of Casper's instrument. L. Lever for modifying the curve of the catheter tip. S. Slide. S. Screw for fixation. OC. Ocular.

Fig. 6.—Nitze-Alharran double-barreled cystoscope for ureteral catheterism. L. Lever. CC. Conducting canals. S. Screw. OC. Ocular.

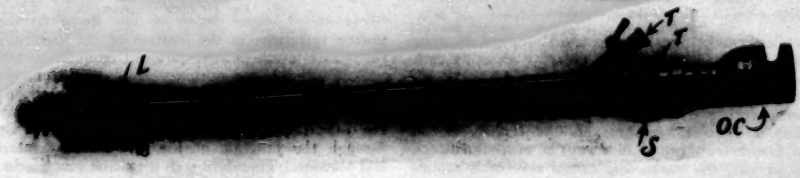

Fig. 7.—Bierhoff's modification of double-barreled Nitze-Alharran cystoscope. The turnable tube carrying the conducting canal is rotated for 90 degrees around the shaft of the cystoscope. L. Lever. TT. Conducting tubes carrying cocks. S. Screw. OC. Ocular.

ureteral openings which are hardly visible, or even if visible can not be entered by the ureteral catheter, can be made practicable for catheterization by forcibly elevating the bas fond of the bladder through one or two fingers inserted into the rectum, or through the distention by a colpeurynter placed in the rectum. In cases in which the trigonum-mucosa is in a fluffy condition, hyperemic and easily bleeding, we are able to anemize it and make the trigonum practicable for examination by applying a few drops of adrenalin solution previous to distending the bladder. Such a con-

All the instruments with indirect view are based on the ideas suggested by Nitze and Casper. The principle is to attach to the upper edge of the instrument a conducting canal for the catheter so that the end of this canal is located next to the window and the underlying prism so that the central end of the ureteral catheter will appear at the concave side of the beak. Casper made the upper wall of this canal movable so that it represents a longitudinal sliding base which can be used for directing the tip of the catheter (Fig. 3).

It is evident that the slide bar pushed forward will curve the catheter in the arc of a smaller circle, so that the catheter tip is directed at a greater angle from the longitudinal axis of the instrument. On the other hand, when the slide bar is withdrawn the protruding end of the ureteral catheter is permitted to direct itself in a large curve and hence more in the line of the longitudinal axis of the cystoscope. When the slide bar is removed from the instrument the ureteral catheter falls out of its groove in the cystoscope, and hence is entirely free in the urethra. Then the slide bar can be replaced and the groove reconstructed into the original canal and may be utilized again for the passing of a second catheter without removing the cystoscope or the first ureteral catheter. Albarran added to this cystoscope a little lever which is placed under the distal end of the conducting canal (Fig 4). A screw attached to the funnel end of the cystoscope directs the motion of this lever, which gives the catheter tip a more or less angular dip; this instrument has got the slide bar in Schlifka's instrument (Fig. 5). All these principles, except the slide bar, are applied to those instruments which carry two canals for inserting catheters in both ureters at the same sitting without withdrawing the instrument, the so-called double-barreled cystoscopes (Fig. 6).

Bierhoff tried to improve on the double-barreled Nitze-Albarran cystoscope in a way; he made the attachment carrying the conducting canals revolvable around the shaft of the cystoscope (Fig. 7). After the ureteral catheters are inserted it is possible to turn the beak of the cystoscope again upward without disturbing the catheters in their location and position.

These instruments are used in the following way: After the bladder has been flushed out and filled (we do not limit ourselves to any specified amount of fluid, but dilate the bladder for ureteral cystoscopy to such an extent that the patient can bear it without discomfort), the cystoscope is introduced so that we are sure that the beak is freely movable inside of the viscus. Now the electric light current is turned on and a sufficient intensity of light secured by inspecting the vertex of the bladder. This technic for securing the proper strength of light is better than to turn the beak to the trigonum immediately after its introduction and then gauging the light. After the light has thus been properly adjusted the beak is first turned toward the trigonum. In order to examine the trigonum closely it is necessary to lower the ocular end of the cystoscope. This movement of the cystoscope is the most disagreeable on account of the stretching of the suspensory ligamentous apparatus attached to the symphysis. Every movement of the cystoscope in this position is very keenly felt by the patient on account of the overstretched condition of the posterior urethra. If the cystoscope is left or kept in this position for any length of time the male patient becomes very nervous and restless.

In order to discover the openings of the ureters it will, if normal conditions prevail, be necessary to deviate with the beak of the cystoscope for about 45 degrees from the medium plane to the left or to the right, according to the ureteral opening sought for. This motion is accomplished by rotating the cystoscopic shaft in the forceps, which act as a handle. The following variations in the location of the ureteral openings occur in otherwise a normal trigonum.

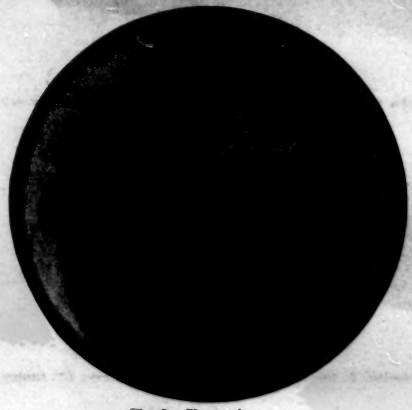

Fig. 8.—Short trigonum.

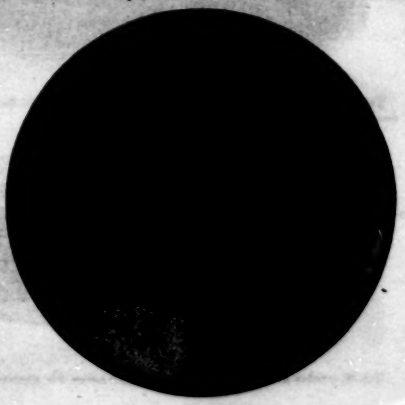

Fig. 9.—Long trigonum.

Both the ureteral openings are located very close to the internal urethral orifice. This may be the case to such a degree that the ureteral openings lie inside of the funnel which is formed by forcing a cystoscope through the junction of the internal urethral orifice and bladder. Therefore it is a routine practice to start scanning the trigonum from the dark, red fold marking the internal urethral orifice. In some cases of this kind, it is necessary to dilate the bladder to the limit so that the ureteral orifices become practicable for the catheters. In cases of this kind we are often able to see the ureteral openings as transparent pink ovals, being illuminated from behind, while in any average distention of the bladder it would be impossible to catheterize them. In such cases, then, the greatest distention of the bladder must be employed. This condition is called a short trigonum (Viertel) (Fig. 8).

Another variety is the so-called long trigonum (Viertel). Here the ureteral openings lie way inside of the bladder, and, as a rule, the frontal distance between them is a rather great one (Fig. 9). In the

great majority of these cases the intra-ureteric ligament is well pronounced so that it runs as a prominent strand through the field of view, thus giving a prominent landmark, at either end of which the ureteral opening is to be found. Further abnormalities in the relative location of ureteral openings may be the following: While, as a rule, Nitze's remark comes true, that if one is able to locate one ureteral opening it is very easy to find the other one, because the ureteral openings are always situated symmetrically, still there are some exceptions. One of the more frequent is that one of the openings is located centrally just opposite the urethral orifice, the other one lies somewhere laterally (Fig. 10). This condition may always be suspected if the following symptoms complex is reported. Shortly after the bladder is emptied urinary calls set in, whose intensity decreases more and more with the time that elapses after urination, and disappears entirely with progressing dilation of the bladder until the normal limit of extension is reached. The bladder mucosa proper shows no signs of inflammation. This condition evidently has to be explained by the fact that the

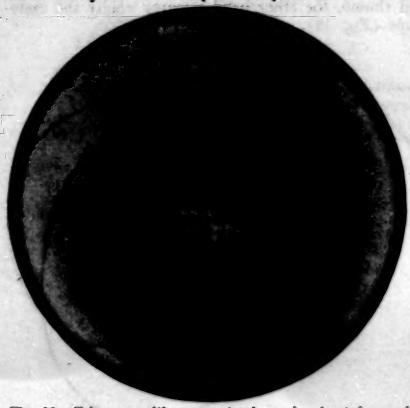

Fig. 10.—Trigonum with one ureteral opening located opposite the urethral orifice.

ureteral whirl, squirting from the ureteral opening lying opposite and close to the internal urethral orifice, strikes the sensitive urethral mucosa until the increasing dilation of the bladder places the centrally located ureteral opening more inside the viscus. Inflammatory conditions and others which are apt to change the normal configuration of the trigonum were discussed in the general remarks.

Summing up the features of the ureteral cystoscopes, we can say this: Up to a recent time it certainly was easier to find the ureteral openings through a cystoscope with indirect view than with those of direct view, but with the latter method the introduction of the ureteral catheter met with less difficulties than in the instruments of the indirect vision type. The ureteral openings are more easily found by the indirect vision instruments equipped with Nitze's lens system because, as a rule, they have a larger field of view, so that in every position of the cystoscope a larger area of the trigonum becomes visible and the illumination of the ureteral openings from behind is only possible with these instruments.

The insertion of the ureteral catheters is more difficult for two reasons. First, we are never able to bring the opening of the conducting canal of this type of instrument close to the ureteral mouth. That is apparent by looking at a drawing showing a cystoscope in position. The distance between the window of the cystoscope and the canal is necessarily a large one. Second, the tip of the catheter does not protrude into the bladder at an angle favorable for introducing it into the ureteral opening (Fig. 11). This latter condition was early recognized and resulted in the construction of the various contrivances intended to enable us to give the catheter end the various directions. The only commendable appliance for this purpose is Casper's sliding lid. Albarran's lever has some drawbacks. In the first place it necessitates an enlargement of the caliber of the cystoscope. Second, it increases the number of sharp edges at the concavity of the instrument. Third, if put in use it interferes quite often with the easy gliding of the catheter. Two features common to all ureteral cystoscopes of indirect

Fig. 11.—Specimen of male bladder opened. Casper's cystoscope inserted, catheter sticking in ureteral orifice.

view are very disagreeable. One is that inspection of the trigonum and insertion of the catheters can only be accomplished while the cystoscope is kept in a position which is uncomfortable to the patient. The other is that even the most refined workmanship can not prevent the sharp edges and nooks which are the consequences of the construction. The insertion of catheters in both ureters at the same sitting is explained by the notes attached to the respective drawings (Fig 12).

Latzko and Mirabeau catheterize the ureters in the female by separating the conducting tube entirely from the cystoscope of indirect view. First the bladder is filled with water, then the conducting tube, armed with the ureteral catheter, is introduced. This accomplished, a very small Nitze examining cystoscope (children-cystoscope Fr. 18) is introduced, the ureteral opening focused and the catheter is inserted (Fig. 13).

Although the authors are rather enthusiastic about their method, there are serious disadvantages connected with it.

In the first place, the method is only applicable in women; second, the introduction of two instruments

through the urethra is very annoying to the patient; the use of the children-cystoscope gives only a small field of view, so that even under slight pathologic changes in the trigonum the locating of the ureteral openings is rather difficult. Catheterizing both ureters at the same sitting is almost impossible, because withdrawing the conducting tube is almost invariably followed by a dislodging of the first inserted ureteral catheter, by the friction against the strongly curved tube.

The instruments of direct view are all built after a principle, first laid down by Brenner in the early 80's (Figs. 14 and 15). The cystoscope is a Nitze cystoscope No. 2, to whose lower edge a conducting canal is attached. The view is a direct one; the distance between the window of the cystoscope and the opening of the conducting canal is a minimum one (Fig. 16). If the ureteral openings are not too far apart they can both be located by bringing the beak in a parallel position to the trigonum. If, however, the ureteral openings lie further apart, lateral movements must be made. That is, we must deviate with the whole shaft of the

Fig. 12.—Patient with inserted double-barreled ureteral cystoscope of indirect view. Both catheters inserted into the ureteral openings. Notice the necessary lowering of the ocular end and the subsequent tension in the parts.

cystoscope for between 25 and 45 degrees from the sagittal medium planum to the left, or to the right, according to the ureteral opening sought (Fig. 17). The inspection of the trigonum again begins at the internal urethral orifice. If an interureteric ligament is to be seen, one follows it either way until we discover the ureteral opening. As we are able to bring the opening of the conducting canal close to the ureteral mouth, it is absolutely unnecessary to give the catheter any special curve.

It is only in extremely rare cases where the ureteral openings are located beyond the crest of the trigonum usually containing them, that in some of these cases a slight curving of the ureteral catheter may be necessary. Then we use the following method: The beak of the cystoscope is withdrawn as closely as possible toward the internal urethral orifice and the catheter passed along into the viscus until it strikes the opposite bladder wall. By gentle permanent pressure the catheter tip glides down on the bladder wall and the catheter end retains, in the warm fluid, its acquired curve. If the cystoscope is again introduced as far as necessary to focus the ureteral opening, the catheter can now be inserted.

In other cases the ureteral openings lie absolutely in the same level as the trigonum mucosa, no ureteral crest being present. In cases of this kind the ureteral openings become practicable for catheterization by pressing downward the whole shaft of the instrument; by making a sort of a dipping movement with the beak the ureteral opening looms up and can easily be entered.

If we desire to withdraw the cystoscope and leave the ureteral catheter in place, we proceed in the following manner: One hand grasps the cystoscope, while the other, seizing the free end of the catheter, keeps on pushing it into the ureter, so that the catheter is forced inward at the same ratio, as the cystoscope is withdrawn. When the beak of the cystoscope and the protruding part of the catheter appear at the ureteral orifice, the catheter hand gets hold of the visible catheter loop and, while this is fixed between the tips of index and thumb, the other hand removes wholly the cystoscope (Fig. 18).

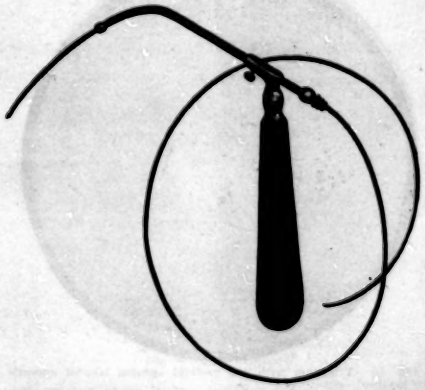

Fig. 13.—Latzko's instrument for ureteral catheterization. Ureteral catheter inserted into conducting tube.

This maneuver can also be employed, if we desire to catheterize both ureters at the same sitting, and we have at our command only a cystoscope that is not fitted with attachments especially adapted for this purpose. The cystoscope, after one ureter is catheterized, is withdrawn in the manner above described, and again reintroduced alongside the catheter lying in the urethra and protruding therefrom.

In the female it is important, however, to have the first catheter on the concave side of the beak in reintroducing the cystoscope for the second catheterism. In this way the first catheter is kept out of the field of view. If we neglect this little maneuver, the first catheter is forced into a loop in front of the cystoscope window, interfering considerably with the free view.

While the maneuver of withdrawing the cystoscope and reintroducing it, armed with the second catheter, is easily carried out in the female without inconveniencing the patient, the whole procedure, although not impossible, is rather awkward and painful in the male.

It therefore became necessary to modify the instruments with direct view in such a way as to allow the catheterism of both ureters at the same sitting in a more appropriate way.

For this purpose two principles are applied. The one is that a double-barreled conducting canal is attached to the lower edge of cystoscopic shaft.

The first instrument of this kind was constructed by Tilden Brown (Fig. 19); later on this principle was adopted in constructing double-barreled instruments to be used with air dilation. Types of these latter instruments are, for instance, Bransford Lewis' and Elsner's instruments (Fig. 20).

Tilden Brown's instrument is a double-barreled cystoscope built after Brenner's principle. The cystoscope, armed with the obturator, is introduced into the empty bladder. Now the obturator is removed, and the bladder flushed out and eventually dilated with a sterile transparent fluid through the hollow shaft of the cystoscope. After this is done, the optical apparatus is introduced into the shaft of the cystoscope.

favor of Casper's instrument. He very soon recognized the above-mentioned disadvantage, and after an attempt to get around these difficulties by some modification, he stopped using it entirely.

All the objections to the double-barreled conducting canal cystoscopes of indirect vision apply to the double-barreled conducting canal cystoscope of direct vision. The instrument can not easily be withdrawn, while the catheters are left in place for the purpose of collecting the urine separately for any length of time. The unavoidable large caliber of the instrument may cause great discomfort to the patient while in place. If the conducting canals are decreased in size the caliber of the instrument is reduced, but the caliber of the catheters that may be used are thus also reduced in size.

The other principle is taken from Casper's first instrument—the principle of having a part of the conducting canal removable so that the first inserted catheter can be thrown out, and after this the conducting canal can be reconstructed, so as to be ready for the insertion of the second catheter. The advantage of this

Fig. 14.—Brenner's ureteral cystoscope. W. Window. CC. Conducting canal. M. Mandrin. OC. Ocular.

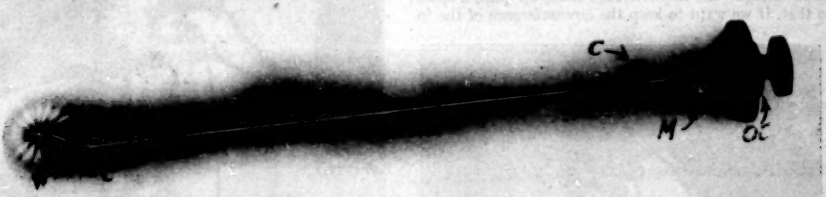

Fig. 15.—Brenner's ureteral cystoscope. W. Window. CC. Conducting canal. M. Mandrin. OC. Ocular.

The optical tube carries the double-conducting canal, and before introducing this part of the cystoscope, both the ureteral catheters are inserted into the tubes. Now the light is turned on, the ureteral openings are focused and catheterized in turn one after the other. While it has to be admitted that in normal cases not much difficulty is experienced in catheterizing the ureters and in leaving the catheters in place after withdrawal of the instrument, the following disadvantages have to be noticed: The instrument, like all double-barreled cystoscopes, is of rather large caliber; the protruding sharp edges of the conducting canal easily produce hemorrhage and darkening of the field of view, if the trigonum mucosa is even slightly diseased. In case it is only possible to insert the ureteral catheters for a short depth into the ureters, withdrawal of the conducting tube will be followed by dislodging the inserted catheters.

Ayres of New York uses this instrument quite extensively, while Young of Baltimore has discarded it in

principle is that the caliber of the instrument may remain within desirable limits; the instrument can be withdrawn after the catheters are inserted without disturbing them in their location. We are in a position to use even catheters with a funnel at their distal end. This is of importance, as it enables the operator to overcome an occasional plugging up of the catheter by injection of sterile water.

In this sense two types of instruments were constructed—a Brenner cystoscope with a movable tube in the conducting canal, and a Brenner cystoscope modified by the authors after Casper's principle.

The first-mentioned modification was made according to our suggestion by Snell of Chicago in this way: that into the conducting canal, open on the lower surface of the Brenner cystoscope, a metallic tube is inserted which can be easily withdrawn and replaced. With the tube in place the first catheter is inserted, then the tube is withdrawn over the catheter; either by turning the cystoscope to one side or by reinserting the tube, the first

catheter is thrown out of the conducting canal into the urethra, and now the tube is replaced and ready for the insertion of the second catheter (Fig. 21).

Fig. 16.—Specimen of male bladder opened. Brenner's cystoscope inserted and ureteral catheter in ureteral opening. Notice the minim distance between instrument and ureteral orifice.

This instrument works satisfactorily in expert hands, although two points are of a more or less pronounced disadvantage—the movable tube takes up quite a space, so that, if we want to keep the circumference of the instrument in proper limits, the lumen of the tube and consequently the caliber of the ureteral catheter must be very small. Second, the friction between the catheter and tube, particularly at the latter's curved distal end, is quite considerable, so that it requires great deftness of manipulation in order not to displace the first ureteral catheter in withdrawing the tube. Once in a while the dropping of the catheter meets with considerable difficulty.

We believe we have succeeded in avoiding these inconveniences without sacrificing any of the advantages of this principle, by adjusting Casper's slide bar to a Brenner cystoscope (Fig. 22). Inasmuch as this slide bar is practically a part of the conducting canal, the latter can be wide enough to allow the passage of the largest sizes of ureteral catheters without unduly increasing the size of the cystoscope (its actual caliber is twenty-three French). After the first catheter is inserted into the ureter, the slide bar is withdrawn and the cystoscope is turned slightly to one side. In case the catheter does not slip out of the now open groove it is easily forced out by the reinsertion of the slide bar. Now the cystoscope is placed in position for the focusing of the other ureteral opening, and the second catheter is passed through the conducting canal (again constructed by the reinsertion of the slide bar). (Figs. 23 and 24.)

After the second ureter is catheterized, the slide bar is withdrawn, the second catheter is dropped into the urethra, and the cystoscope is pulled out of the bladder and urethra. There is no danger as to displacing the ureteral catheters, because the friction between the catheter and ureteral mucosa is con-

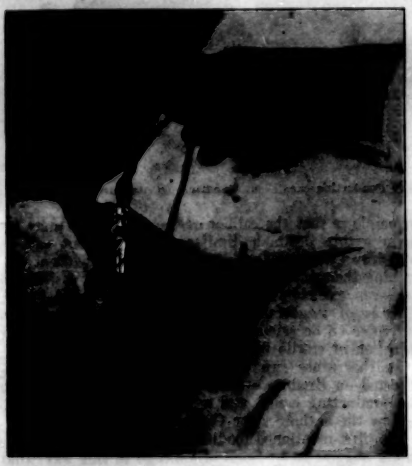

Fig. 17.—Patient with Brenner's cystoscope inserted; ureteral catheter in left ureteral opening. Notice the very slight tension of parts.

Fig. 18.—Female patient. Brenner's cystoscope almost withdrawn out of urethra, so that only its beak remains in urethra. The loop of the ureteral catheter just appears before the orifice and is caught by the thenne forceps as preliminary act before entirely withdrawing the cystoscope over the catheter.

siderably greater than the adhesive force between the catheters and the smooth metallic surface of the cystoscope (Fig. 25).

We are confident that we are now in possession of a ureteral cystoscope with direct view, that is of convenient size and allows of catheterizing both ureters at the same sitting, and allows of leaving both catheters in place, after the cystoscope is removed. It furthermore permits the use of catheters with injection attachment at the distal end.

In regard to the choice of ureteral catheters and sounds the following considerations are decisive: If we endeavor to simply test the patulence and permeability of a ureter, we use a metallic elastic, flexible sound; if we at the same time search for a stone, we cover the tip of the sound after Kelly's suggestion with wax, or produce a thin covering by dipping the end of the metallic sound in bichlorid solution (1-500), so that scratches may become visible. They are more distinct by examining with a magnifying lens.

If one intends to make injections into the renal pelvis, one uses catheters with a centrally located opening; for the collection of the urine and for injection in the ureters, one employs catheters with a lateral eye. In former times great value was placed on certain olive-shaped catheter ends; experience has shown that it was an unjustifiable inference. In collecting urine from patients whose ureters or kidneys are the seat of suppuration, the catheters easily become plugged up; injection of a few cubic centimeters of fluid will remove the obstruction. To employ suction through an attached syringe is a rather precarious procedure, because of the danger of sucking in a mucosa fold and of aspirating blood in this way.

If one wants to get information on the course of the ureters and the topography and size of the renal pelvis, one employs lead wires for sounding; their ends have to be smoothed by melting.

If it is desirable to measure distances, to ascertain how deep the catheter is inserted into the ureter, we use so-called zebra catheters. The covering of these catheters is graded in yellow and black fields in turn, each field one centimeter long; by counting the number of colored segments that disappear into the ureter, the distance can easily be measured (Fig. 26).

It is expedient to lubricate the catheters before in-

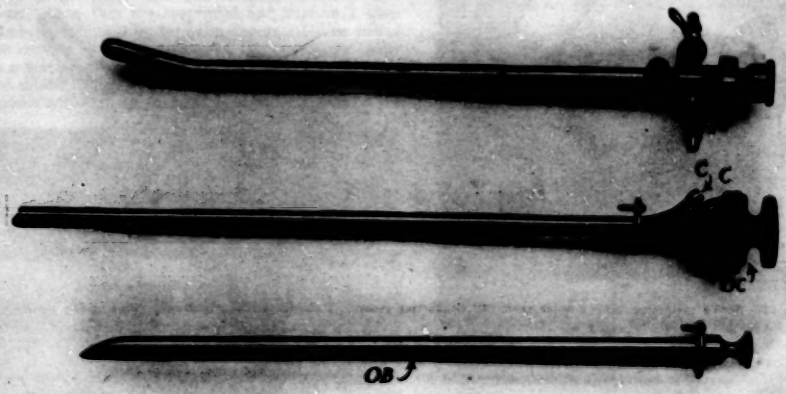

Fig. 19.—The Tilden-Brown double-barreled catheterization instrument. CC. Conducting canals. OC. Ocular. OB. Obturator.

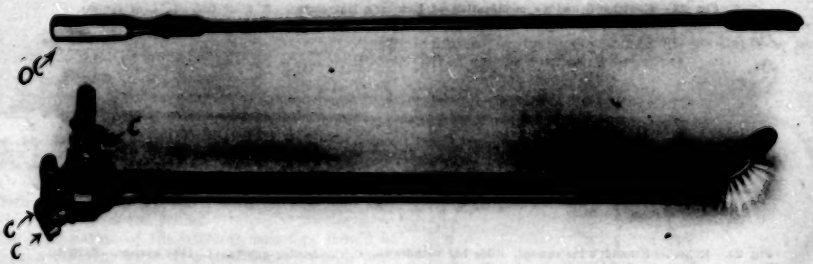

Fig. 20.—The Bransford Lewis instrument of direct view. CC. Conducting canals. Upper C. Cock. OC. Obturator.

troduction, either with glycerin or Casper's lubricant. In this way we secure an easy gliding and prevent at the same time injury to the ureteral walls. The lubrication at the same time prevents the bladder fluid from running alongside the surface of the catheters.

In case one draws blood through one catheter shortly after insertion, Casper suggests to move up the catheter tip a little farther; if the bleeding come from an injury of the ureteral mucosa, produced by the catheter, the catheter eye passes above the place and the hemorrhagic tinging of the urine will disappear.

It is a good plan to mark the catheters in some way, so as to be sure into which ureter each of them leads. We either select catheters of different color, or tie one of them, after application and eventual removal of the cystoscope, in a loose loop.

If there should be any doubt as to the sterility of the bladder mucosa, we disinfect the viscus previous to cystoscopy by irrigating with a silver-salt solution. After completed cystoscopy, it is a routine practice to flush again with a non-irritating silver-salt solution or to instillate a few drops of a concentrated solution.

Peculiar difficulties may arise if a ureter does not allow of passing a catheter or sound to any depth. The reasons for this may be twofold. Either the mucous membrane is in such a condition that it obstructs the passage or the ureter is distorted in such a way that its meandering loops do not let pass a catheter or a sound that is not very stiff. The last-mentioned condition will occur most frequently after gynecologic operations that lead to changes in the topographic surroundings of the ureter. We succeed, however, in entering the ureter in such a case by using metallic sounds. Quite often this sounding is facilitated by injecting sterile oil previous to the attempt.

Swelling of the ureter lining, if only due to infection and inflammation, can easily be overcome for the time of sounding by instillating a few drops of adrenalin solution. The mucosa is enemized for some time. The obstruction is in this way removed, and the catheter or the sound is easily passed along.

If, however, the swelling of the ureteral mucosa is due to traumatism, conditions are entirely different. Tears in the mucosa or bloody suffusions catch the catheter tip, and any forcible attempt of passing the catheter leads to further laceration of the mucosa. These traumatic injuries to the ureter and mucosa are either due to awkward attempts of catheterization or to the

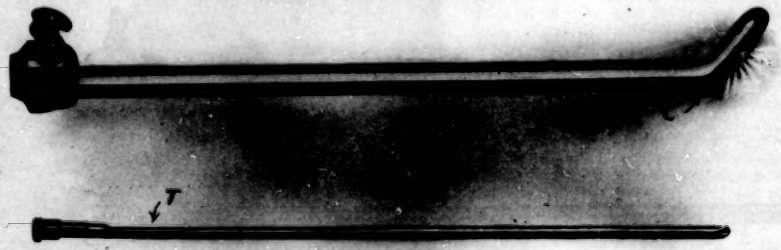

Fig. 21.—Snell's cystoscope with movable tube. C. Conducting groove. T. Movable tube withdrawn. Lens system removed.

Fig. 22.—Kolischer-Schmidt's modification of Brenner's instrument. S. Slide bar. L. Lens system.

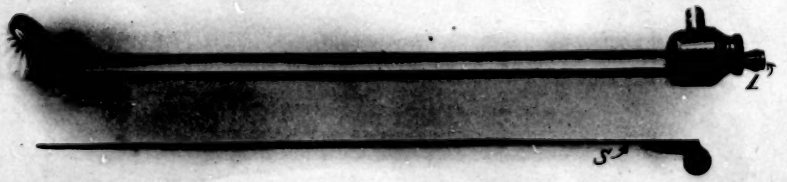

Fig. 23.—Kolischer-Schmidt's instrument. Slide bar withdrawn. C. Conducting groove. L. Lens system. S. Slide.

passing of a large or sharp-edged kidney or ureteral stone. In such a case we have to wait for some time until the injuries have healed up. We might enhance this process by the application of iodoform solutions.

Some of the cystoscopes can be sterilized by boiling, especially those of American make that do not have any windows closed by a glass plate. All those cystoscopes that are fitted with cemented glass windows and silver-plated prisms do not stand boiling. These instruments have to be rendered sterile in the following way: They first are scrubbed with tincture of green soap, afterward rinsed with sterile water and then dried with sterile gauze. Then they are suspended and kept in a glass chamber permeated by formalin vapors. If one wishes to add an additional precaution, the cystoscope before use is submerged for some time in a 3 per cent. carbolic-acid solution. All this scrubbing and submerging can be done without injuring the lens system, because the

Fig. 24.—Kollscher-Schmidt's instrument inserted into patient. Catheter inserted into left ureter, slide bar half way withdrawn. S. Slide bar.

modern instruments are fitted with a metal cap that can be screwed over the ocular.

The sterilization of the ureteral catheters should be done in a different way. If a sterilizer with high pressure and live steam is at command the catheters can be sterilized in this manner: After they are taken out of such a sterilizer they are to be kept in a glass tube, in which formalin vapors are constantly developed. If such a sterilizer is not to be had, or if sterilization has to be accomplished in a very short time, the catheters are boiled in water. In this case the catheters have to be carefully wrapped in gauze so that no two surfaces of the catheter come in contact, otherwise the catheter loops become glued together and the catheter is ruined. It is our practice to put the catheters immediately before use into a 1-1000 bichlorid of mercury solution; before insertion into the cystoscope they are rinsed with sterile water and lubricated with glycerin. Metallic sounds are simply boiled before use.

When the urethra of the patient is suspicious of pathogenic germs, it is to be irrigated with antiseptic solution previous to cystoscopy. As a mere matter of routine, this should be done in all cases. Besides have the patient take 0.25 gram urotropin four times a day for some days previous to ureteral catheterization.

Fig. 25.—Kollscher-Schmidt's instrument inserted in the patient. Catheter inserted into right ureter, thrown out into the urethra. Instrument ready for catheterization of the left ureter.

The same surgical cleanliness has to be as strictly enforced by the operator and his assistants as in any other aseptic surgical interference.

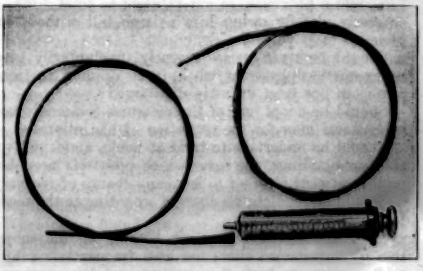

Fig. 26.—Syringe and ureteral catheters. Zebra catheter above syringe; left to syringe, catheter with funnel-shaped end for receiving the tip of syringe.

The Small Medical School.—Osler says that the day has passed in which the small (medical) school without full endowment can live a life beneficial to the students, to the profession, or to the public.

THE BUSINESS SIDE OF A PHYSICIAN'S LIFE.*

H. BROOKER MILLS, M.D.
PHILADELPHIA.

. . . So far as reviewing the work of the past year is concerned, I would only like to call your attention to the excellent work done by both the scientific business and membership committees, together with the faithful work of the secretary and the hearty co-operation of the members. I feel that our programs have always been a credit to the society; our attendance has been on a gradual increase; our membership roll has increased rapidly, and our benefit to the profession at large has been more felt than ever before. That the branch movement in the county medical society was a good one, has been well proved by the past two years' work of our own branch, and not only has it been the means of causing a great deal of good work to be done, but it has also shown us in what direction much more needs to be done. The experience of the last two years has borne excellent fruit in the way of organizing the medical profession in this city, as well as stimulating its organization in other parts of the country, and I feel the work already accomplished probably far exceeds the expectations of the prime movers in this work, both of whom have been and are ardent supporters of our own branch, i. e., Drs. Eaton and Hirsh.

I thought I would discuss for a few moments this evening the subject of physicians' relations, and desire to do so under the heading of relations to, first, their patients; second, their fellow-members of the profession, especially consultants; and last but not least, to themselves.

As to the physician's relations to his patients, the views are so widely different and the relevant subjects so numerous that any concise expression of opinion is out of the question, but after conversing with physicians and the laity on the subject, I have come to the conclusion that much misunderstanding frequently exists between the physician and his patient as to the proper relation the one bears to the other, sufficient in many cases to work to the detriment of the patients. Such questions as the following all have a bearing on the subject under discussion:

Should a physician go out at night to treat a case in a family already owing him a large bill without any prospect of payment?

Should he treat a case recently involuntarily given up by another physician, when, in his opinion, the other physician has been unjustly discharged?

Should he adopt any of the measures commonly used by business men for the collection of his bills?

Should he undertake to treat at home, amid unfavorable surroundings, the cases which positively need hospital treatment in order to have any chance of recovery?

Should he regulate his charges according to the means of the family treated?

In fact, these have so much bearing on the subject that the last-named query has been frequently a subject of discussion in both the medical and lay press very recently. To decide these questions, the physician must either act as a physician or as a man, and his decision will be widely different, depending on which point of view he takes. While I know of cases where the purely human side has dominated, frequently to the physician's loss, yet I am sure that there are many where a purely medical side has decided the matter, not unfrequently to the patient's loss. The great question to my mind is: Can not the two sides be so commingled diplomatically that at least, in a majority of cases, neither side is the material loser? And I have come to the conclusion that the solution of the problem lies in one thing, and that is the training of the patient by the physician, which I admit is more an art than a science. In many cases the properly trained patient can be induced to avoid allowing bills becoming too large, often obviate calling the Doctor late at night, and not to become dissatisfied on slight provocation, and seek advice elsewhere on the spur of the moment, and I know of several prominent physicians in this city who can personally testify to the great advantages to be derived from what they term "The Training of the Patients." Particularly is this true in reference to the question of fees, and many of the controversies, especially such as have frequently become public on the question of charge, could be avoided, did the physician, in the first place, possess, and in the second, make more intelligent use of, a sufficient amount of business knowledge to practically as well as scientifically deal with the sick.

As to the second point, that of the physician's relations to the fellow-members of the profession and especially consultants, this again is a broad subject and one which is capable of much abuse. Did we but act and feel at all times toward our fellow-practitioners as we do toward our patients and were we always as anxious to retain the esteem of the former as the good will of the latter, I feel we should frequently be much more considerate in our expressions and more liberal in our views. In the same way as some of our poorest patients have proven to be our best practice builders, some of the apparent unknown members of the profession have proven to be the stepping-stones to at least fortune, if not fame, of some of the leading members of the profession to-day.

It is, therefore, a matter for serious thought as to, 1, the time to ask for consultation; 2, who to ask for, and 3, what shall be done with the fee.

I personally feel entirely incompetent to express any weighty opinion on this subject, but if data obtained by conversation, correspondence and reading, plus a small amount of experience count for anything, it certainly does enable me to express the opinion that the consultant's fee belongs to him and him alone. Here, again, arises the question as to the fee to be charged, and it does seem to me only justice that the consultants should be willing to consult for whatever fee the attending physician believes to be the maximum of the patient's ability to pay, and this once agreed on, should be looked on as the property of the consultant exclusively. A question not unfrequently asked, where this fee is not paid at time of the consultation, but is made to form part of the total bill for services rendered for that illness, is, should the attending physician pay the consultant in full out of the first moneys received, or divided out *pro rata* between the consultant and himself? And as much data as I have been able to collect on this subject, when boiled down yields a majority opinion in favor of the first proposition, i. e., the full as well as prompt payment of the consultant. This seems only fair, when one considers that should nothing ever be paid for any of the services rendered, the attending physician would not feel under any obligation to personally pay the consultant, which I think is an additional

* Address of the retiring chairman of the North Branch of the Philadelphia County Medical Society, Jan. 14, 1904.

reason why the latter should receive his fee out of the first payment made.

The third and last question, that of the physician's relations to himself, would probably be more carefully expressed if it was called "his duty to himself." The overworked, partly fed and half-rested physician can not do justice to those entrusted to his care, nor is his zealous application to the relief of the suffering of others sufficiently understood to be appreciated by a large majority, especially of the suffering laity. The natural inborn selfishness of the human race, plus, as before mentioned, the lack of a proper training, added to more or less pain, not only obscures keen perception, but also benumbs the highest sensibilities of the rights of others sufficient to make very arduous if not well nigh impossible the satisfactory filling of the duties of the medical practitioner of to-day. In brief, the conclusion from this third and last question is that the medical man of to-day should make himself more a living example of the fruits of preventative medicine, in order to better fit himself to practice the art of scientific medicine.

In concluding this brief and as yet incomplete address, I desire to thank the members as sincerely and heartily for their uniform courtesy and kindness to me during my term as chairman, as I did and do again for honoring me with the election one year ago, and to take the liberty of asking for my successor a continuance of that same leniency and consideration, which has enabled one so poorly fitted for the position to close his term of office with the branch in such a satisfactory condition as the North Branch is to-day.

SURGICAL TREATMENT OF PULMONARY ABSCESS.*

VAN BUREN KNOTT, M.D.
SIOUX CITY, IOWA.

As the surgical treatment of pulmonary abscess still presents many difficulties to be overcome and problems for solution, the personal experience of operators in this line of work, even though that experience is limited, will be of assistance in formulating rules for future guidance.

No résumé of the literature will be attempted, as several scholarly articles published during the past two years have anticipated and rendered unnecessary such a procedure.

Experience has demonstrated that multiple lung abscesses and those accompanied by bronchiectasis are, as a rule, not benefited by operation. Tubercular abscesses and those due to the presence of a foreign body in the lung will not be considered, as they present complications placing them in classes by themselves, and with their surgical treatment I have had no experience. Metastatic and embolic lung abscesses are multiple and not amenable to surgical treatment.

This leaves for our consideration those cases of single pulmonary abscesses the sequelæ of pneumonia, with which may also be included those rare cases due to rupture into the lung of abscesses of the liver, those of appendicular origin, etc. These may be roughly divided into two classes, acute and chronic, and may or may not be accompanied by gangrene and bronchiectasis. As the mortality following surgical treatment of cases so complicated is fully twice as great as that of the simple cases, it is urged that these patients be given the better chance which is offered by timely surgical intervention.

With the general symptoms and diagnosis of pulmonary abscess there exists equally general familiarity. The surgeon will not, as a rule, see these cases until the diagnosis has been made by the internist, who has been in attendance and will be called on not so much to make a diagnosis of abscess as to determine its exact location, with the hope of surgical relief. This may be at times extremely difficult and often impossible.

In two cases which I have seen and which will be referred to again, although the patients presented all the symptoms common to abscess of the lung and the physician in attendance, as well as I, was satisfied of its existence, we were only able to locate it in the one case at the autopsy, and in the other suffered the indignity of having our diagnosis confirmed and our failure to locate the abscess accentuated by its rupture into the pleural cavity with empyema as the penalty.

While in many quarters attempts to locate the abscess by aspiration have been denounced as unsafe and injudicious, my limited experience has taught me the inadvisability of attempting to open an abscess of the lung without the aspirator as a guide. The physical signs common to this condition in many cases are alone not sufficient to render its exact localization possible, and, while we may be satisfied that in a given instance the lung contains an abscess and from the usual methods of examination have decided as to its location, this point should be positively corroborated by the aspirator before proceeding with the operation. In Case 2, reported below, I was so certain of the existence of an abscess in the lower lobe of the left lung that, despite my failure to locate it with the aspirator, I exposed the suspected area and subjected the patient to a severe and prolonged operation during my fruitless search for the pus. Fortunately, in the greater number of these cases, pleural adhesions are present so that unless repeated punctures are made, some of which may be beyond the area so protected, the danger of extravasation is slight.

In cases where the history and physical signs lead us to suspect pulmonary abscess, the localization must be made as accurately as possible by the usual and well-understood methods of examination. The patients should then be prepared for operation, and under local anesthesia an attempt to aspirate the abscess is made. The aspirator, which should carry a short needle of good caliber, should be introduced at the center of the suspected area, as at this point the protecting adhesions are most likely to be present. If pus is not found at this first attempt the needle should not be withdrawn completely from the lung, but as nearly so as possible and reinserted in various directions until it enters the cavity. This will prevent the multiple punctures of the pleura and diminishes the danger of extravasation of septic material into the pleural cavity.

When pus is found the needle should be left as a guide and chloroform administered, it being in the class of cases under consideration preferable to ether. A free incision, rendered so by the partial resection of at least two ribs, should then be made, well exposing the diseased area.

Pleural adhesions will usually be found present over the surface sufficiently large for the purpose. If absent the pleura must be sutured with catgut, using the common "back stitch." The suture line is then reinforced with iodoform gauze packing and the operation may be

*Read at the Thirteenth Annual Meeting of the Western Surgical and Gynecological Association, held at Denver, Dec. 28-29, 1903.

finished at the one sitting. This walling off of the pleural cavity may usually be effectually accomplished as above described and is preferable to postponing the second part of the operation in these weakened patients. If, owing to the extreme friability of these tissues, such suturing is impossible, because of the constant tendency of the stitches to tear out, the walling off must be accomplished by gauze packing and the operation deferred until sufficiently firm adhesions have formed.

As, in the absence of adhesions, collapse of the lung may occur, it is advisable to have at hand for immediate use the Fell-O'Dwyer apparatus.

For the purpose of opening the cavity in the lung I prefer a probe-pointed pair of coarse dressing forceps, which are introduced alongside the needle into the cavity and the blades slightly separated. After the pus has been evacuated the opening may be cautiously enlarged by still further spreading the forceps, until of sufficient size to permit the examination of the cavity by the finger. Bands of tissue running across these cavities frequently carry large vessels and must not be carelessly torn loose.

The cavity should now be thoroughly wiped out with pledgets of gauze. Irrigation should never be employed. Tubular or gauze drainage have both been used. I use a flaring, cigarette, iodoform gauze drain, that is, one so constructed that the rubber tissue comes not quite to the end of the gauze, which may be spread to loosely fill the cavity, the rubber preventing the sticking of the gauze to the external portion of the wound. This is changed as the case demands, and must never be permitted to act as a "stopper," "corking up" the wound secretions. This device has answered every purpose and has been better tolerated than the tubes.

If gangrene is present the gangrenous tissue should be snipped away with scissors as carefully and completely as possible, the rest of the treatment differing in no way from that above described. The after-treatment is governed by the usual surgical principles.

To return to the aspirator. If after careful, thorough and systematic search pus is not found by this instrument, further operative interference should be abandoned, so that the patient may be spared the danger and uncertainty which it entails. I report the following cases:

CASE 1.—H. C., boy, aged 12. I was asked to see this boy by his attending physician, who had already made a diagnosis of abscess of the lung following a severe lobar pneumonia seated in the upper portion of the left lung. The patient presented the history common to such cases. Examination disclosed the physical signs of an abscess occupying the middle external portion of the upper lobe. The patient was prepared for operation, and under local anesthesia a good-sized aspirating needle was introduced at the center of the suspected area, in the axillary line. The first puncture was negative, but after four or five attempts, slightly changing the direction of the point without completely withdrawing it from the lung, pus was encountered. The needle was left *in situ* and a U-shaped flap raised. This flap was buttonholed to permit of its retraction over the needle and this opening, being subsequently enlarged, was employed for drainage.

Portions of two ribs (about two inches) were then resected. The pleura being adherent a large, probe-pointed dressing forceps was then passed in alongside of the needle, and at the depth of an inch entered the abscess cavity.

About two and one-half ounces of pus were evacuated. The forceps were then spread slowly until it was possible to pass the finger into the cavity, which was then wiped out with gauze. Hemorrhage was slight. The cigarette drain, constructed as described above, was then introduced and brought out through the buttonhole in the center of the flap. The flap was then sutured in place and moist dressings applied. After seventy-two hours the drain was removed and a fresh one inserted daily thereafter. The cavity closed rapidly and the boy made an uneventful convalescence.

The operation in this case has been described rather at length, as it was closely followed in the remaining cases and will not be again detailed. Especial attention is called to the buttonholing of the flap, which allows of its withdrawal over the needle, furnishes ample drainage and permits of the restoration of the parts by suture.

CASE 2.—Mrs. G., aged 37, was seen with her physician, who had diagnosed pulmonary abscess subsequent to pneumonia. The history seemed typical of this condition, and examination revealed the usual physical signs of an abscess in the lower portion of the lower lobe of the right lung. Careful and prolonged search with the aspirator failed to find pus. As we were certain the abscess existed, and thought the pus might be too thick to enter the needle, the lung was exposed as in the preceding case. Pleura was adherent and a pair of dressing forceps was thrust into the lung at the center of the suspected area. No cavity was encountered, but a profuse hemorrhage ensued, which was controlled with difficulty by gauze packing and the wound closed. The patient's symptoms were all aggravated after the operation until her death, which occurred ten days later. At the autopsy a large abscess cavity was found occupying the lower lobe of the lung posterior and external to the spot suspected by us. I consider that I made a serious mistake in persisting in the attempt to give operative relief after failing to locate the abscess with the aspirator.

CASE 3.—Mrs. H., aged 40. I had made a hysterectomy on this woman some weeks previously, removing a large myomatous uterus. The third day following the operation she developed a lobar pneumonia involving the base of the right lung. This pursued a rather severe course, and was not marked by the usual crisis. Soon symptoms of sepsis developed, and we were forced to the conclusion that pulmonary abscess existed as the signs of its presence became more pronounced. Several attempts were made by the consultant and myself to locate the abscess, by the usual examination and with the aspirator, with failure each time. After two weeks of this uncertainty the abscess ruptured into the pleural cavity, this accident being rapidly followed by empyema. The usual surgical treatment was immediately employed, and after a most prolonged and tedious illness she made a good recovery. My chagrin at failing to locate the abscess in this and the preceding case may be better imagined than described.

CASE 4.—John B., aged 22, was seen with his physician, who had made the diagnosis of abscess of the lung secondary to pneumonia. The patient presented the usual history of such cases. Examination pointed to the presence of an abscess in the lower lobe of the left lung. After the usual preparation an aspirator was inserted about the middle of the lobe and slightly anterior to the axillary line. At the first attempt pus was found. The operation was then proceeded with as in Case 1, the pleura being adherent. The cavity was somewhat larger than in the first case and contained about three and one-half ounces of pus. Subsequent treatment was same as Case 1. Recovery was apparently perfect.

As the treatment of these cases by other than surgical methods promises so little, and as the complications of gangrene, empyema and bronchiectasis so seriously increase the mortality, even in the hands of the best operators, it would appear that a plea made for early operative relief of patients suffering with pulmonary abscess is not inconsistent with the facts.

NOTE.—The completion of the paper of Dr. Murphy, begun in the last issue, is unavoidably postponed.

Saw Wood.—Let us cultivate the gift of taciturnity and consume our own smoke with an extra draught of work, so that those about us may not be troubled with the dust and soot of our complaints.—*Osler.*

Special Article.

THE ARMY MEDICAL DEPARTMENT.

V.

MEDICAL SUPPLY TABLES FOR THE ARMY.

(*Concluded from p. 1419.*)

If the average physician would examine his prescriptions at the end of a month he probably would be surprised to find what a small list of drugs he had made use of altogether. But to the fact that each practitioner has his own favorites, which in no case will exactly coincide with his neighbor's list, is due the enormous number of drugs which crowd the shelves of the apothecary. If, by a judicious system of elimination, two-thirds of these could be made to disappear, it is probable that, after we had accustomed ourselves to a proper use of the remainder, no one but the manufacturers would suffer.

The tendency of modern civilization is to surround men with a constantly increasing number of objects which are at first luxuries, and then, as their use becomes universal, finally come to be regarded as necessities. But for the soldier in war the process is reversed, and he is quickly and rudely stripped to the elemental necessities. The more active the campaign, the more does the great basic problem of transportation assert itself, and the more severe is the process of elimination of superfluities, and when the trains at last carry only food and ammunition, these, with his rifle, his blanket and the clothes on his back, constitute the soldier's irreducible minimum of equipment and supply. The medical department, like every other part of an army, must come under the inexorable restrictions of the question of transportation, and on the redundant superfluities of the pharmacopeia this process of elimination must fall with a heavy hand.

The military surgeon should be accustomed, even in time of peace, to work with a few tools and to get full use of them, and so in all military establishments he is required to adapt himself to the use of the standard therapeutic agents and to a supply table in which duplicates in therapeutic effect are as far as possible eliminated. But to the civil practitioner who comes into the military service and encounters the narrow limitations of field service, without any preparatory training, the bald economy of a list in which half of his pets do not find a place, is faced with rebellion and disgust, and the lack of the corner drug store is very acutely felt. The weaning period is apt to be one of wails and complaints against a niggardly government and a moss-backed and hide-bound medical department, but time and experience do not fail to bring to the medical recruit the silence of philosophical contentment.

The first medical supply table for our Army known to the writer was published in the Army Regulations of 1814. It contains 103 drugs, including different preparations of the same medicinal agent. The unsuitableness of fluid preparations for military use had even then become recognized, and the list contains no tinctures, the only fluids being acids, oils and four spirits. About half the list are still represented in one form or another in the present supply table. Many have so long disappeared from modern medical practice that their names are unfamiliar to the physician of to-day, such as gamboge, lap's culaminaris, folia supul. communis, radix scicent. virg. (?), spermaceti and oleum succini.

The simplicity of the regimental hospital in the field can be judged from the transportation allowed it in the following regulation:

"4. A two-horse wagon shall be allowed to each regimental hospital, in which shall be conveyed a medicine chest of 200 or 300 weight, and three other chests under lock and key for blankets and bed sacks, cooking utensils and hospital stores."

A faint adumbration of the female nurse in the Army is to be found in these regulations, but the duties of this humble prototype would be scorned by her proud and accomplished sisters of to-day and in this more gallant age are relegated to the hospital orderlies. Regulation 3 provides that—

"3. Every regimental hospital shall be supplied with one or more female attendants. It shall be the business of these to scour and cleanse the bunks and floors of the rooms or tents, to wash the blankets, bed sacks and clothes of the patients, to cook the victuals of the sick and to keep clean and in good order the cooking utensils."

It is interesting to examine the supply table of the United States Army, published in 1863, after two years of experience in a great war, and to compare it with the supply table of forty years later. The list of 1863 contained 130 drugs, of which 6 are different preparations of the same drug. Of these, 100 are found in substantially the same form among the 206 drugs on the supply table of to-day. Among those which have been dropped out the most notable are catechu, chlorinium (materials for preparing), conium, potas. nitras, scylla pulvis, senega, spigelia, valerian, veratrum viride and zinc acetas, carbonas and chloridi liquor. A reminder of the days of hospital gangrene and laudable pus is contained in the directions for preparing chlorin gas, and it is directed that the gas be generated under every alternate bed every night when the wards contain many sloughing wounds or are subject to epidemic disease or low fevers. One noticeable feature of the list is that it is probably the only supply table ever published for the Army in which calomel and tartar emetic are omitted. Their omission is explained by the following circular:

[Circular No. 6.]

SURGEON-GENERAL'S OFFICE,
WASHINGTON, D. C., May 4, 1863.

1. From the reports of medical inspectors and the sanitary reports to this office, it appears that the administration of calomel has so frequently been pushed to excess by military surgeons as to call for prompt steps by this office to correct this abuse; an abuse the melancholy effects of which, as officially reported, have exhibited themselves not only in innumerable cases of profuse salivation, but in the not infrequent occurrence of mercurial gangrene.

It seeming impossible in any other manner to properly restrict the use of this powerful agent, it is directed that it be struck from the supply table, and that no further requisitions for this medicine be approved by medical directors. This is done with the more confidence as modern pathology has proved the impropriety of the use of mercury in very many of those diseases in which it was formerly unfailingly administered.

2. The records of this office having conclusively proved that diseases prevalent in the Army may be treated as efficiently without tartar emetic as therewith, and the fact of its remaining on the supply table being a tacit invitation to its use, tartar emetic is also struck from the supply table of the Army.

No doubt can exist that more harm has resulted from the misuse of both these agents, in the treatment of disease, than benefit from their proper administration.

W. A. HAMMOND, Surgeon General.

But it was said that the heavy hand of the patriotic practitioner could not be thus arbitrarily restrained,

and the surgeons purchased their own calomel and gave it as before until it was restored to the supply table.

The medical pannier of 1863, which was intended for the use of regimental surgeons, contained 49 drugs, of which about half were liquids. Curiously enough, the tartar emetic in it seemed to have escaped the eye of Surgeon-General Hammond, although there is no calomel, and the military liver had to fall back on pilulæ hydrarg. for a stimulant. The present supply table, which is intended for posts, base and permanent hospitals, contains with the disinfectants and stimulants 206 drug preparations. While everyone will fail to find some favorite among them, it is probable that there is no drug for which a therapeutic equivalent may not be found on this list or by a combination of drugs on it. There is also a shorter field list for the mobile field and regimental hospitals. It contains 106 drugs, including disinfectants and stimulants. They are mostly in tablet form, only 14 being liquids. As the regimental and field (brigade) hospitals are not supposed to immobilize themselves by long treatment of grave cases, this smaller and more portable collection of drugs is supposed to suffice; and it would undoubtedly do so if the serious cases were promptly transferred to fixed hospitals. It was against a field supply table like this as applied to division hospitals which has become fixed by the reception of large numbers of typhoid cases that so loud an outcry was raised in 1898, and the War Department promptly and properly extended to them the larger list.

The regimental surgeons, on whom the inexorable law of mobility operates still more severely, must, under the conditions of active service, content themselves with 66 drugs contained in the regimental medical chest, while for a battalion or smaller detachment there is a detached service chest which contains, beside surgical dressings and appliances, a modest assortment of 26 medicines.

The last final sacrifice to mobility is made when the surgeon leaves all of these behind and must satisfy himself and his patients with the contents of the emergency case which each non-commissioned officer of the Hospital Corps carries on his back, and which contains 20 small vials in addition to the ordinary hypodermic tablets.

The progressively severe process of selection from the supply table list of two hundred drugs to the emergency case with one-tenth of that number, has been made conservatively and in accordance with the dictates of long experience. Action has not been arbitrary (except in the case of Surgeon-General Hammond's edict against calomel, which undoubtedly called attention to what was at that time a grave abuse), but in the adoption of new remedies and the abandonment of old ones the aim has been always to follow the rule laid down by Pope with regard to the use of words:

> Be not the first by whom the new are tried,
> Nor yet the last to lay the old aside.

Clinical Reports.

A CASE OF FATAL FORMALDEHYD POISONING.

LOUIS A. LEVISON, M.D.
TOLEDO, OHIO.

History.—C. K., male, age 60, Swede, a patient at the county hospital, secured access to a bottle of commercial formaldehyd (40 per cent.), used for disinfecting purposes and swallowed with unknown intent, an unknown quantity, estimated at two or three ounces. The fact that the patient had been recently released from a workhouse sentence and was a long sufferer from a chronic dysenteric condition might lend weight to a suicidal purpose, which, indeed, was the substance of the coroner's verdict.

Symptoms.—When first seen, a few minutes after swallowing the formaldehyd, the patient was lying in bed, where he had been carried after falling to the floor. He was tossing around in bed, groaning aloud, evidently suffering intense pain. Questions could not be, at least were not, answered. The diagnosis was made by the odor of formaldehyd on the breath, after eliciting from other patients that he had been seen drinking something. Lachrymation was profuse, respiration noisy and labored, rate 30, with loud mucous rales from the greatly increased secretion of mucus in the nose, throat and mouth. The pulse at first was strong, rate 112, but gradually weakened and finally became imperceptible. Cyanosis was marked. Unconsciousness soon intervened, lasting about ten minutes, from which the patient partially recovered. Deep cyanosis and widely dilating pupils preceded death. The patient lived in all about twenty minutes after first being seen.

Treatment.—An effort to pass a stomach tube was unsuccessful, apparently owing to a spasmodic contraction of the esophagus, with tightly clenched jaws. The patient could not or would not co-operate at all in this effort. Three hypodermatic injections of apomorphia, 1/10 grain each, were without any effect. When the pulse began to fail, resort was had to strong stimulation with strychnia and adrenalin without apparent effect.

Necropsy.—The examination, 30 hours after death, showed blood still fluid, dark brownish-red in color. The stomach contained several hundred c.c. of fluid, having a strong odor of formaldehyd. The mucosa of the lower part of the esophagus, stomach and first portion of duodenum were dark, chocolate brown in color and of the consistency of leather. All organs and tissues in contact with the stomach were "hardened" in a similar manner to a depth of about one-third of an inch. The bronchi contained an excessive amount of mucus.

ABDOMINAL PAIN AND PNEUMONIA.

S. A. FOOTE, M.D.
MATAGORDA, TEXAS.

The subject of abdominal pain masking and dominating the clinical features of pulmonary lesions has been discussed in two most interesting reports in THE JOURNAL recently. I have to record the following case:

History.—D. W., female, unmarried, aged 20 years, American nativity, previous health good, had an attack of articular rheumatism in November, 1901. Joints of hand affected. Patient was taken sick Feb. 20, 1902. In the morning of this day patient complained of headache and backache, which were severe. She retired to her room and to bed. Chill followed by rise of temperature occurred. In the afternoon patient complained of severe pain in right iliac region which was moderately severe. Vomiting occurred repeatedly. Patient was given a mercurial purge which operated freely on morning of February 21. Patient did not complain of pain in right iliac region as on preceding day, but vomited during forenoon. At about 1 p. m. this day chill occurred. The mother said the nails became blue and bluish spots appeared on the face.

I saw her for the first time at 4 p. m., February 21. I found the pulse 120 and weak, respirations 50, temperature 102, breath offensive, mouth dry. The patient complains of severe pain in back of head and back, and patient appealed so piteously for relief that I gave 6 grains of acetanilid before the examination was proceeded with any further. On inquiry concerning pain previously complained of in right iliac region, patient said there was none now, but on making slight pressure at McBurney's point patient gave evidence of excessive tenderness. This was circumscribed within an area of about 10 cm. square. There was no tumefaction, but some rigidity of muscles superimposed on the appendiceal region. All food was discontinued, water in small quantities being allowed.

The diagnosis of appendicitis was made and consultation asked for. Drs. Simons and Morton of Bay City were called and concurred in the diagnosis. At 10 o'clock p. m. the pulse was 125 and very weak. Patient complained of being cold, and bottles of hot water and more bedclothes were added. This chilliness lasted throughout the night. On the morning of February 22 at 6 o'clock, every preparation for operation having been made, patient was examined and it was found that there was tenderness over the entire abdomen, more sensitive in the appendiceal region. Pulse 120, temperature 103, respirations 30.

On account of an apparent amelioration of the symptoms operation was deferred. Throughout the day the temperature ranged between 103 and 103.6 F., pulse 112 to 120, respirations 30. Patient complained of headache continuously. Rested well through night until 4 a. m., February 23, when I was called and found her suffering with severe pain in right side under nipple. Temperature 103.6. Chilliness had just preceded this pain. The right lower lobe was found to be involved in a pneumonic process, which ran a characteristic course and terminated by crisis on afternoon of February 27, the seventh day from the first onset of the illness.

Comments.—The interesting features of this case were the entire absence of all signs pointing to any lung involvement until the third day of illness. The absence of cough and pectoral pain had led me away from the chest to the abdomen, where I felt secure in my diagnosis of appendicitis. The frequency of the respiratory rhythm, which I had first noticed, if it had persisted, would have aroused my suspicions finally sufficiently to have caused me to search for an explanation in the lungs, though my subsequent conviction was and still is that the most searching examination would have revealed nothing of note in the lung prior to February 23, when the chill and pleuritic pain directed the attention forcibly to the chest.

Whether or not the pneumonic process initiated the attack, as the date of the crisis would seem to indicate, I am not prepared to say, but the absence of the well-known signs, viz., pleuritic pain, cough and rusty sputum, almost inseparable from lobar pneumonia, led me to forget the entity of this process in the reckoning of disease.

ENCEPHALOCELE.

E. C. RUGE, M.D.
SHELTON, WASH.

History.—The child was born after normal labor June 4, 1902. Parents healthy. No enlargement of cranium was noticed till third day, when a marked enlargement was found (goose-egg size), in the right parieto-occipital region. The base was broad (3 in.) and circular. The tumor was non-reducible.

Treatment.—After the part was shaved, I applied pressure over the whole area by means of collodion and threads of absorbent cotton. The dressing was extended well over the side of the tumor so as to have a firm hold. The contraction of the collodion exerted a constant pressure which could not be displaced as the ordinary bandage could. The tumor was redressed every day, dissolving the collodion over small area, by applying sulphuric ether, and reapplying dressing immediately, continuing the process till the whole area was redressed.

The recently applied collodion contracting, the encephalocele was reduced to half original size in ten days. At this time the collodion cracked, and when I saw the child again the tumor was larger than originally. Carefully continuing treatment for six weeks, dressing three times a week, it was again greatly reduced, when the irritation of the collodion made necessary a change. A piece of gauze large enough to cover it was drawn tightly over the tumor and fastened at the edges with collodion, some pressure being exerted by the hand till the collodion dried. This dressing was changed once a week for a month, the tumor being reduced a little each time. It was then no longer necessary, as the parieto-occipital suture had closed, leaving a slight amount of thickening at the former site of tumor.

Results.—The tumor disappeared in two months' time. This was not due entirely to treatment, but I believe that if the tumor had not been reduced the suture could not have closed. This dressing is more to be relied on than bandages, which are prone to slip and become loose, and are hot and uncomfortable. If carefully applied, the size of tumor can be controlled without pressure effects.

The child walked at 11 months and now, at 23 months of age, is able to talk a little. There has been apparently no effects from the tumor. The case was seen by two other physicians, one of whom advised excision, which was agreed to, but was subsequently found unnecessary.

PERFORATING GASTRIC ULCER.

WITH RECOVERY AFTER OPERATION.

J. J. GOODWIN, M.D.
CLINTON, MASS.

H. K., aged 22 years, previous to March 6, 1904, never had any stomach symptoms. He occasionally used alcoholic stimulants. For his supper the evening of March 5 he ate a quantity of baked beans, and at 1 a. m., March 6, he indulged in another meal of baked beans. The second meal did not taste right and he was taken sick and vomited in a few minutes after eating it. This was followed by severe abdominal pain, and pain in both shoulders. I saw him two hours later, when he was having considerable pain, with mucus vomiting. An enema that had been administered failed to secure an action of the bowels. He was tender all over the abdomen; pulse and temperature were normal. Dr. W. P. Bowers saw the patient with me, but a positive diagnosis could not be made. Exploration was urged, and assented to by the family.

Operation.—Eight hours after the appearance of symptoms we operated. An incision was made for an investigation of the appendix; it was not normal and was removed. A large amount of thick, turbid fluid was found. An incision for investigating the stomach was then made, and flakes of lymph and the escape of gas led the way to a perforation on the anterior surface near the pylorus. This we closed by a purse-string, and reinforced with Lembert sutures; a posterior gastroenterostomy by suture was then performed. The abdomen was thoroughly washed out, the first incision aiding the procedure very much. The night of the operation his temperature rose to 102.4; pulse, 130; respiration, 28. The abdomen became much distended. Drainage was used for four days. His temperature reached normal on the sixth day, and in four weeks the patient was discharged well.

Comments.—I call attention to two points: 1. The absence of symptoms of ulcer or indigestion previous to the perforation. He was surely not a dyspeptic when he would indulge in a diet of baked beans. 2. The intense pain in the shoulders.

Dangers of Heroin.—Among recent synthetic products none is more widely used than heroin—an artificial or rather synthetic morphin salt, which many physicians employ with the idea that it is a harmless succedaneum for morphin. On the contrary, it has all the dangers of morphin salts in general and additional dangers of its own. Cohen, writing in *American Medicine*, says he has seen suppression of urine and threatening coma from small doses of heroin (one-twelfth grain) prescribed to check cough or relieve pain. Especially dangerous are the trade preparations containing heroin—the composition being sometimes expressed in their proprietary titles and sometimes not. These combinations are widely advertised as cough syrups, asthma cures, etc. He declares that preparations of this character should never be used by physicians, who should be able to make their own combinations with or without morphin, and adapted to the needs of the individual case before them. Heroin is one of the most toxic agents of the morphin group. It has its legitimate uses, uncombined, in small, carefully watched, infrequent doses; but not with the idea that it is anything else than a morphin salt.

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THE SYMPTOMS AND DIAGNOSIS OF OBSTRUCTION OF THE MESENTERIC VESSELS.

The diagnosis of intraabdominal disease is at times admittedly difficult. Nevertheless, the symptoms, apart from an accurate diagnosis, are not rarely sufficient to justify surgical intervention, which may thus be the means of saving life under desperate circumstances, while, even if it prove to have been unnecessary, little additional risk will have been incurred.

Among the obscure and uncommon disorders of the abdominal cavity is occlusion of the mesenteric vessels, which gives rise to a train of symptoms at times strongly suggestive of intestinal obstruction, and for the relief of which the sole hope resides in abdominal section and removal of the gangrenous bowel. This subject is exhaustively treated in the article commenced in THE JOURNAL this week by Drs. Jackson, Porter and Quimby.

Among other American authors Roswell Park[1] has recently reported two cases of this condition, both of which terminated fatally, despite prompt operation, and he considers at some length the etiologic factors and the symptomatology, and briefly the treatment. As he points out, the mesenteric veins are unprovided with valves and the arteries are terminal, so that in the event of obstruction to the flow of blood through these vessels from any cause the establishment of a collateral circulation is ordinarily not to be expected. Such obstruction may occur as a result of embolism secondary to mitral stenosis or arteriosclerosis, or of thrombosis secondary to a similar condition in the veins of the pelvis, the kidneys or the intestine. The interference with the circulation is followed by necrosis and infarction varying in extent with the vascular area involved, and in accordance with which also the mode of onset and the intensity of the symptoms vary. In the most severe cases the patients indicate almost the exact moment when the pain sets in, the remaining symptoms following in quick succession. The pain is at times paroxysmal, at other times continuous. It is almost always severe and often agonizing. It is sometimes described as intense colic. Rarely it is slight or absent. Diarrhea occurs in from 30 to 40 per cent. of the cases and is usually an early symptom, the discharges being profuse and bloody. The symptoms of intestinal obstruction at times resemble those of ileus, at other times those of constipation, and they may be followed by diarrhea. Vomiting usually occurs early, the matters ejected being bloody, or even fecal. The pulse is rapid, rarely being under 110, and it may reach 130 or 140. The temperature is at times subnormal. Meteorism appears early and becomes marked. Together with abdominal rigidity, it renders examination difficult, although both indicate the gravity of the situation, while they interfere with the means for affording relief. At a later period fluid may find its way into the peritoneal cavity, and finally symptoms of collapse and delirium make their appearance and are followed by death. It is said that tenesmus, sacral pain and the presence of fresh blood in the stools are indicative of obstruction of the inferior mesenteric artery, and that pain in the umbilical region and tea-ground stools point to obstruction of the superior mesenteric artery. It is scarcely possible to make a distinction between occlusion of the artery and that of the vein. In every instance in which the existence of mesenteric thrombosis or embolism is suspected search should be made for the presence of a similar lesion elsewhere.

Among the conditions from which mesenteric thrombosis and embolism are to be differentiated are perforating ulcer of the stomach and the duodenum, phlegmonous gastritis, abscess of the stomach, acute intestinal obstruction, pancreatitis, acute splenic infarction, acute appendicitis, acute cholecystitis, ruptured ectopic pregnancy and various intrathoracic disorders, such as pneumonia. The treatment consists in opening the abdominal cavity and resecting the gangrenous bowel.

1. Annals of Surgery, April, 1904, p. 554.

EPIDEMIC CEREBROSPINAL MENINGITIS.

The specific type of cerebrospinal meningitis which is now generally conceded to be due to the meningococcus of Weichselbaum is endemic in many of the cities of this country and in certain eastern cities has assumed epidemic form. The statistics of Greater New York show that, while last year the average number of deaths from the disease in the springtime was about six per week during the present spring the deaths have averaged over sixty per week. The death rate of reported cases seems to be near to 50 per cent., which is about what is usual in ordinary epidemics.

The most interesting feature of the present epidemic is the inevitably suggested relationship between epidemic cerebrospinal meningitis and croupous pneumonia. Foreign clinicians are practically a unit in declaring that the disease is likely to be more frequent at periods when pneumonia rages with special virulence and that, on the other hand, pneumonia itself is likely to be complicated by meningeal symptoms much more frequently when specific cerebrospinal meningitis is epidemic. Pneumonia has been more prevalent and more fatal this year than ever before, and so the announcement of epidemic cerebrospinal meningitis raging with virulence is an exemplification of the old observation that has so long had a place in the text-books. Just what possible connection there may be between the two diseases is as yet undetermined. It is to be hoped that the present epidemic will furnish opportunities for the successful solution of this

important problem. There are many bacteriologists who seem to think that just as the pneumococcus may exist in a healthy throat without producing any bad effect until certain conditions arise to give it the chance for successful invasion of the lungs so the meningococcus intracellularis may exist in the secretions of a healthy nose until a favorable combination of circumstances gives it the opportunity for an invasion of the meninges. The meteorologic conditions favoring the two diseases seem to be the same

As to whether the disease is contagious or not also remains unsettled. Certain it is that the affection does not seem to be traceable from person to person who have been in contact with patients suffering from the disease, but occurs in many parts of the city at about the same time and without any recognizable relation to preceding cases. It has been said that the disease occurs more commonly in crowded, uncleanly populations. This, however, remains to be demonstrated, since the superabundance of population in such quarters justifies the occurrence of more cases of the disease on simple numerical grounds without any necessity for pleading a greater predisposition to its acquirement.

The treatment of the affection so far has not been satisfactory. In cases of sudden onset, where the prognosis is grave, and where coma comes early in the case, the removal of a certain amount of cerebrospinal fluid by lumbar puncture often brings relief of symptoms and the apparent beginning of a decided movement toward recovery. At times where there is a relapse into coma, or even a series of them, further relief may be afforded by the lessening of intracranial and intraspinal pressure by successive withdrawals of cerebrospinal fluid. The question of injecting some mild antiseptic that might prove effective in helping the tissues to get rid of the infective agent occurs at once. A 1 per cent. solution of lysol has been used for this purpose with apparent relief in some cases, though there are conservative observers who do not consider that it affects the eventual course of the case. Epidemic cerebrospinal meningitis is in its course so uncertain a disease that it would require an analysis of a large number of cases treated in this way before a definite decision could be reached. In the meantime all are agreed that opium must be used freely to relieve the patient from the intense discomfort accompanying the disease, and by making him less restless give better chance for the avoidance of the exhaustive condition which surely facilitates a fatal termination.

EMPIRICAL METHODS IN THE TREATMENT OF INOPERABLE CANCER.

In the cancer wards of the Middlesex Hospital are only cases of inoperable disease, and it has been the policy of the medical office to give these patients the benefit of a trial of the various "cures" that are suggested from various sources from time to time, whether the cure is based on rational grounds or not, provided always that the trial is not prejudicial to the comfort or the health of the patient. In the recently issued report from this hospital the results of these therapeutic experiments are given, and, although they are about what might be expected, yet a perusal of the report is extremely interesting. Some of the methods employed are noticeably much more under consideration in England than here, as, for example, the operation of oöphorectomy for carcinoma of the breast. This method was introduced by Beatson, on the principle that the atrophy or removal of the ovaries is followed by atrophy of the breast, and that possibly similar changes might occur in the cancers of this organ. The impression that seems to have been gained by the experience of the hospital and of operators elsewhere in England is that in some cases oöphorectomy has been followed by decrease in size of the original growths, and particularly of recurrent nodules about the scar left after operations on the breast. The best results have been obtained in patients over 40 and before the menopause, and when they are free from bone and visceral complication. However, the cases reported from the Middlesex Hospital would hardly suffice to arouse much enthusiasm over the benefits of oöphorectomy, and some of the English surgeons even take the ground that this procedure really augments the rate of growth of the tumors.

Treatment with electric currents of high potential and rapid frequency has also attracted attention, particularly because of a general popular interest aroused by the press. Beyond some improvement in the general tone of the patients and slight changes in the local conditions, no results were obtained. The lay press also stirred up much enthusiasm over a most simple way of "curing cancer," in which the potent agent was an extract of violet leaves; reports of definite cure were not wanting. Even this remedy was given a fair trial—with no results, of course. Marigold ointment was another vaunted specific which failed to live up to its reputation. One of the latest of these empirical methods is of Australian origin, the *vis medicatrix* being furnished by molasses. Our English confrère had some difficulty in procuring this material and eventually had to get it from Louisiana. Even with this, the real article, no cures were obtained; possibly, however, there is a difference in the therapeutic worth of the Louisiana and the Australian products! Of ordinary drugs the only ones tried were Chian turpentine and anilin chlorid, both of which have had "booms."

Cancroin, which was introduced by Professor Adamkiewicz of Vienna, has caused much spirited controversy on the continent, although little heard of here. Originally the "poisonous products of cancer tissue" were used, but now neurin is used in their place, and remarkable results have been described by certain Viennese physicians, and warmly questioned by others. In the Middlesex cancroin seems to have succeeded chiefly in causing much pain when injected, without any beneficial results. Acting on the hypothesis advanced by Foulerton, that the secretion of the thyroid and thymus exerted an in-

hibitory effect on the growth of epithelium, a number of cases were treated by extracts of these organs and also with serum from animals immunized against them; seemingly the results have been practically nothing. The *x*-rays have given by far the best results in these inoperable cases, particularly through their ability to clean up the ulcerating surfaces and to lessen pain. The effect on pain seems to be dependent on a sensory paralysis, which may also be observed in *x*-ray dermatitis, and pain due to pressure of the growth on nerve trunks is not readily influenced. Their results, however, hold out no prospects of cure in any of these advanced cases, and they state plainly that "*x*-ray treatment of malignant disease should never be attempted where an operation is possible," although it also is claimed that "in *x*-rays we have an agent that has perhaps done more for the relief of inoperable cancer than any method hitherto known." It is interesting to note that investigations have been made of the various cancer parasites that have been described in recent years, and that none of them is considered worthy of detailed notice in the laboratory reports.

ANTICROTALUS VENIN.

A number of years ago Calmette succeeded in preparing an anticobra venin that has decided protective properties against cobra venom, but it has been shown that this antivenin does not protect against the venom of other snakes, as, for instance, the rattlesnake (*Crotalus adamanteus*) venom. This is not surprising, however, because we know through the researches of Flexner and Noguchi that the venoms from different species of snakes have a very different constitution. Cobra venom owes its toxicity chiefly to neurotoxin and rattlesnake venom to hemorrhagin which destroys the endothelial cells lining the small blood vessels and causes extravasation of blood into the tissues around the point of inoculation. These venoms contain, however, other toxins beside those mentioned, such as hemolysin, and the rattlesnake venom seems to contain still other substances having a local destructive effect on the tissues.

A number of attempts have been made to prepare an antitoxin for rattlesnake venom, but the destructive local effects of this venom were for a long time seemingly insuperable difficulties. It was clear that the local action of this substance had to be destroyed by converting the toxins into toxoids before they could be successfully used in immunization, but the great difficulty was the production of such toxoids. Heating the venom was tried, but it was found that by this treatment the hemorrhagin is entirely destroyed instead of being converted into toxoid, and hence the injection of venom thus altered does not give rise to antihemorrhagin, while it may give rise to antineurotoxin and antihemolysin because the neurotoxin and the hemolysin are not destroyed by heating to 75 C. This is the plan adopted in the preparation of Calmette's antivenin, but it leaves out of account the local effects of certain viper venoms. These local effects are, however, the chief dangers of the poisoning by rattlesnake venom, and hence any antivenin that leaves them out of account must fail to protect against this venom.

Flexner and Noguchi[1] have recently succeeded in preparing an efficient anticrotalus venin by repeatedly injecting rabbits and dogs with a solution of the venom which had been treated for twenty-four hours with 2 per cent. of HCl or .3 per cent. of ICl_3. Crotalus venom thus treated is deprived of its destructive local effects, but when injected into an animal is still capable of producing antibodies for the locally acting substances. Evidently the HCl and the ICl_3 convert the hemorrhagin, and probably other toxins contained in the venom, into toxoid; 0.5 c.c. of serum thus prepared by injecting a rabbit protected white rats against several times the minimum fatal dose of rattlesnake venom, while it failed to exhibit any antitoxic effect for cobra and daboia venom. This serum is markedly antitoxic and antihemorrhagic for crotalus venom, but not antihemolytic or antineurotoxic, because the HCl and the ICl_3 entirely destroy the hemolysin and neurotoxin instead of converting them into toxoids. The neurotoxin and hemolysin are not important constituents of the rattlesnake venom, and hence they may be left out of account in the production of antivenin for this particular venom. It is different, however, with the cobra venom, because here the neurotoxin is the most important constituent, and we could therefore not expect that anticrotalus venin would protect against cobra venom. The experiments have brought to light the interesting fact that anticrotalus venin does not only fail to protect against cobra and daboia venom, but it hastens death of the animals when injected with these venoms. It will be interesting to know why this serum accelerates death by the other venoms, but this point has not yet been positively determined.

INJECTION OF ADRENALIN TO PREVENT REACCUMULATION OF SEROUS EFFUSIONS.

Effusion of fluid takes place into serous cavities under a variety of conditions, principally inflammatory and cardiovascular. When present in small amount, the fluid may, and it usually does, undergo spontaneous absorption. If, however, the amount be large, not only may the fluid remain unabsorbed, but it may, beside, be a source of distinct danger by reason of the pressure it exerts on vital organs, with the resulting interference with function. To secure relief under the latter conditions, puncture or aspiration or some form of resection often becomes necessary, but even then the fluid may reaccumulate, at times with great rapidity, so that repeated operation is required. It would be a decided advantage to possess a means by which such a difficulty could be obviated, and the suggestion has recently been made on the basis of clinical experience that reaccumulation of fluid in serous cavities after aspiration can be prevented by injection of adrenalin chlorid.

1. Jour. Medical Research, May, 1904.

Having observed in a case of abdominal carcinoma with secondary involvement of the pleura that the injection of one dram of 1-1000 solution of adrenalin chlorid, after removal of a large amount of fluid that had repeatedly accumulated in the pleural cavity, was followed by failure of further accumulation, Dr. James Barr[1] was led to employ the same expedient in a case of ascites secondary to cirrhosis of the liver, in a case of pericarditis with effusion subsequently complicated by pleurisy with effusion first on the left and then on the right side, in a case of tuberculous peritonitis with ascites, and in another case of pleurisy probably tuberculous with effusion, with equally satisfactory results in all. In the last three cases from one-half pint to three pints of sterilized air was additionally injected after removal of the fluid in the hope of preventing adhesions. The injected air may serve, beside, as a means of preventing possibly fatal collateral hyperemia and edema of the healthy lung in consequence of the diminution in pressure resulting from the withdrawal of a large amount of fluid from the pleural cavity. The air is absorbed slowly, and for this reason it is to be preferred to oxygen. Under certain circumstances, however, as when an excessive number of leucocytes are present in the fluid or there is an apparently commencing formation of pus, it is thought the injection of hydrogen dioxid might be of advantage. A special form of apparatus, serving at once as siphon, syringe and aspirator, was devised for removing the fluid and injecting the adrenalin solution and the sterile air. Under all circumstances great care must be exercised in the manipulations in order to avoid accidental infection. In an additional case of hydrops ventriculi, supposed to be due to a cerebellar tumor, ten minims of adrenalin solution were injected twice and twenty minims once after removal of several ounces of fluid from the lateral ventricle and drainage.

While the number of observations recorded is insufficient to permit of the formulation of definitive conclusions, they may serve as the starting point for further clinical trial. It seems superfluous to add in this connection that, like other agents having great physiologic activity, adrenalin must be employed here, as elsewhere, with great discrimination.

1. British Med. Jour., March 19, 1904, p. 649. See THE JOURNAL, April 9, p. 982.

RACE SUICIDE.

The *Chicago Inter Ocean* points out the well-known fact that, with the imperfections of the vital statistics in this country, we can form very little idea as to the increase or decrease of the birth rate. But abroad, where special records have been kept most accurately for years, the case is somewhat different, and the question of race suicide can there be put to the test of fact. It quotes from the recent volume of H. G. Wells, "Mankind in the Making," which applies this test to England and Wales, and finds that, while the birth rate has declined between 1850 and 1896 from 33.8 to 28 per 1,000, the death rate has also declined from 23.3 to 17.7. Subtracting the death rates from the birth rates leaves a normal increase of the population and shows only a fall of 0.2 per 1,000. But he still further shows that the ratio of illegitimate births has declined in England and Wales from 2.2 in the period from 1846 to 1850 to 1.2 in the period from 1896 to 1900, and that but for this decrease an actual rise of 0.8 per 1,000 would have been shown by the figures. This would indicate that England and Wales are not only not becoming decadent by the decreasing birth rate, but are becoming more moral, and in this counteract the deficiency of 0.2 per 1,000. The fact is that the question of race suicide is really a local one. It may be a serious fact in certain sections, but applied to large territories or whole countries there are many factors which have to be considered, and which will necessarily call for much reserve in any conclusions that may be deduced.

ANGINA PECTORIS AND ABDOMINIS.

While many cases of angina pectoris are attended with sclerosis of the coronary arteries, the latter condition is not rarely encountered independently of symptoms of the former. It would thus appear that some other factor must be responsible for the clinical picture, and existing evidence supports the view that this resides in increased vascular tension. Symptoms of angina pectoris have been observed also in association with obvious vasomotor phenomena in the extremities, without demonstrable disease of the heart. Dr. J. Pal,[1] as a result of clinical studies, considers the phenomena in the peripheral vessels as an integral part of the attack of true angina, which he includes among the vascular crises. He recognizes two typical varieties, namely, the pectoral and the abdominal. The latter is comparable, in his opinion, with the abdominal crises of tabetic patients and with lead-colic, the symptoms of which he attributes to contraction of the abdominal vessels. It is a well-recognized fact, further, that sclerosis or occlusion of the abdominal vessels is attended with pain of varying severity and duration, often associated with symptoms suggestive of intestinal obstruction. Pal has observed a number of cases of both pectoral and abdominal angina in which during the paroxysm, the pulse-tension was found increased both by palpation and by tonometric estimation. The nutrition and the function of the heart will necessarily suffer, and death may take place as a result of the disease of the coronary arteries; but this condition is not sufficient to account for the attacks of angina. General increase in arterial tension is not alone the determining factor in an attack of angina, but this consists rather in the limitation of the vascular constriction to circumscribed areas, as, for example, the thoracic or abdominal viscera, and this may be brought about as a result of reflex influences. Therapeutically, good results have been obtained from the use of nitrites and iodids, while more recently the administration of preparations of theobromin and of cyanids has been recommended. Morphin relieves the pain of the attack, without influencing the arterial tension, and it may thus fail to avert a fatal issue.

1. Wiener med. Woch., April 2-9, 1904.

CLINICAL OBSERVATIONS AND MECHANICAL REFINEMENT.

An interesting subject considered at the recent meeting of the Association of American Physicians was that presented by Stengel[1] on "Clinical Studies in Arteriosclerosis." According to Stengel's observations the first sign of beginning arteriosclerosis, which occurs at a considerable period before any thickening of the artery can be observed, is a prolongation of the first sound of the heart. With care this can be observed before the accentuation of the second sound. As it is at this period of the affection that prophylactic measures may be of real help, this observation would seem to be of the first importance for the treatment of a disease which so far has been considered rather out of the range of successful therapeutics. Another of the very interesting observations made is that in spite of the general impression to that effect, blood pressure in arteriosclerosis is not necessarily always high. The observations demonstrating this point were made with a Riva-Rocci sphygmomanometer, as modified by Stanton in this country. This instrument measures not only the blood pressure during systole, but also and especially during diastole. Stengel's results obtained in this matter were confirmed by a manometer applied to a peripheral artery. Constant high blood pressure during diastole is indeed an invariable characteristic of arteriosclerosis. In the discussion Cohen pointed out that years ago Sir William Broadbent had emphasized the fact that in the early stages of arteriosclerosis, as also, of course, later in the affection, pulse tension remained high always between the pulse beats, that is, during the diastole of the heart. Broadbent's observation then, made with the unaided finger and now confirmed by means of a very delicate and rather complicated instrument, shows that some of the old trained delicacy of observation could accomplish as much, with less waste of time, as is now accomplished by means of intricate mechanical appliances.

THE SPECIFICITY OF THE TYPHOID BACILLUS.

Although at the present time we are generally ready to accept without question the idea that the typhoid bacillus is the sole cause of typhoid fever, because of the enormous amount of evidence of various sorts that has accumulated pointing to this view, yet there has always been one weak point in the evidence. The first two of the postulates of Koch that should be fulfilled by an organism before it can be fully accepted as the cause of a given disease have been abundantly satisfied, namely, that the organism must be found constantly present in the disease, and that it must be recovered in pure cultures from the diseased tissues. The third requirement, that the germ produce in an experimental animal the same lesions as are characteristic for the disease in man, has been the stumbling block. Inoculation into animals usually results in the development of acute degenerative changes in the organs, with often much swelling of the lymph glands, and sometimes of the intestinal follicles, but these changes can be produced to a considerable degree by other organisms, and it can hardly be said that the characteristics of typhoid as we see it in man have been reproduced in the experiments. On the other hand, the features of the lesions are quite similar to the anatomic changes found in man, lacking chiefly the characteristic enlargement and ulceration of Peyer's patches. By utilizing the chimpanzee, however, Grunbaum[1] has been more successful, probably because of the closer anatomic resemblance of the lymphatic apparatus of this animal to that of man. In each of two chimpanzees to which were fed typhoid cultures, quite characteristic changes were found in the intestines at autopsy twelve days after the bacilli were administered; the blood also gave the Widal reaction in dilutions of 1-80. The animals did not seem to become very sick, and two animals that were also given typhoid bacilli, and not killed, as were those that were autopsied, did not suffer severely from the infection. Such experiments as these are of great value, but are, of course, almost prohibited by the rarity and cost of chimpanzees. Although it was not necessary to have these results for the purpose of establishing the importance of the bacillus of Eberth, yet it is gratifying to have the last gap in the chain filled. For practical demonstration of the specificity of this bacillus, the recent case of a French woman who attempted suicide by swallowing a culture obtained in a laboratory, is fully as convincing. However, although she developed unquestionably a true typhoid fever, as she recovered it is, of course, impossible to say that she did develop the ulcers in Peyer's patches and the other characteristics of the disease.

THE COLLEGE WOMAN AND CHILDREN.

An interesting article on childbearing among college-bred women is contributed to a current magazine[2] by one who claims to be a college woman herself and intimately acquainted with the views of college women and with their conditions. Recent discussions with regard to the decreasing number of children in native American families has brought out the fact that the group of college graduates has a lower birth rate in proportion to number than any other selected group of women. Statistics in Massachusetts, at least, seem to show that the average number of children of a college-educated wife is less than two; to be exact, just 1.8 children on the average are born to each such mother. As a large proportion of college women—in the eastern states considerably more than 50 per cent.—do not marry, it is easy to understand that the race of college women would soon die out unless supplied by accessions from other social strata. The writer of the article referred to gives a vivid account of some personal knowledge as to the reasons for this low birth rate. They may all be summed up in two, actual infertility and the great danger involved in childbearing for women evidently not intended by Nature to be mothers. She thinks that the real reason for the smallness of the college woman's family is not that they will not, but because they can not, have children, and she tells the story of the experience of various of her classmates. The writer goes so far as to assert that, to her personal knowledge, many women who are prominent in quasi-public life are really desirous of children, but

1. See page 198.

1. British Med. Jour., April 4, 1904.
2. Popular Science Monthly, May, 1904.

they know that they can not have them or that their having them would entail so much risk of life that childbearing is out of the question. To the ordinary family physician these claims will doubtless seem exaggerated. There are weak, delicate women, incapable of childbearing, but this is surely not generally true. At the present time the athletic woman is more than ever in evidence, and the physical development of the American girl—the main element of which is composed of college women—is the admiration of the world. On the other hand, it is admitted that conditions of incomplete development of the genital organs in women are much more frequent than used to be the case. It would seem as though the intense mental application so freely encouraged by our modern educational system during the precious years between twelve and sixteen, when the maid stands where the brook of girlhood and the river of womanhood meet, may very well serve to divert Nature's purpose of developing the sexual side of the being. Even though not so many cases of lack of family or small families are attributable to this fact, as this writer claims, it still behooves physicians to raise their voice in protest once more against the unnatural conditions that have developed and are unfortunately developing still more in our present-day educational system.

THE EPIDEMIOLOGY OF DYSENTERY.

The zealous investigation of the varieties of dysentery bacilli and their agglutination reactions has not been altogether paralleled by epidemiologic studies, and there still remain many obscure points in the etiology of dysentery as affecting both infants and adults. Any inquiry that tends to throw light on modes and sources of infection is, therefore, likely to be welcomed with especial interest. Conradi[1] has recently made an investigation into the prevalence of dysentery in the neighborhood of Metz, and is led by his findings to ascribe the recent extension of the disease in that region to contact infection. There are reasons for believing that in certain districts in Lothringen, especially around Metz, the embers of the disease have been smouldering since the Franco-Prussian war. The recent flaming up of dysentery in this quarter is apparently due, in part at least, to the growth of a non-immune generation, since it appears from the facts adduced by this author that in the recent epidemic the indigenous population of twenty-five years and upward has remained practically exempt from infection. This relative immunity of the older generation is accounted for on the ground of the very general infection of the population in 1870. The author's arguments in favor of the spread of the disease by contact are such as to carry conviction, and are very similar in character to those that have recently been very generally urged for the similar view of causation of typhoid fever. In dysentery, as in typhoid fever, the mild and the chronic cases are believed to be the particularly active agents of dissemination. The dysentery bacillus, to an even greater degree perhaps than the typhoid bacillus, does not seem to maintain its vitality long outside of the human body, and the disease is very largely kept alive by a more or less direct transfer from case to case. There is perhaps nothing particularly novel about all this, although it may be admitted that the situation at the present time warrants special emphasis being laid on the danger incurred by the community in allowing the specificity of mild cases of intestinal infection to pass unrecognized, and the patients themselves to roam at large without control or supervision. The well-known facts concerning the spread of both dysentery and typhoid fever through military encampments afford strong proof of the serious character of contact infection. The full realization of the possibilities in this quarter, although hardly a new discovery, is of sufficient importance to justify all the stress that can be placed on it, and the German investigators who are following Koch's lead in this matter are aiming at a real evil, although perhaps with more of the flourish of discoverers than the historic sense would seem to countenance.

1 Festschrift z. sechsehnten Geburtstage von R. Koch, 1903, p. 555.

THE RELATION BETWEEN PULMONARY AND LARYNGEAL TUBERCULOSIS.

The intimate relation which exists between pulmonary and laryngeal tuberculosis has only been appreciated by the physicians of the last generation. Nearly all of the writers up to 1880 were of the opinion that the majority of the laryngeal complications of consumption were not due to the same cause as the pulmonary lesion. Even at the present time there are great discrepancies in the statistics bearing on the relation between the two conditions. Recently, Frese[1] has analyzed a large number of cases of pulmonary tuberculosis with regard to the laryngeal complications. He finds that primary laryngeal tuberculosis is extremely rare, as has been always held. He believes this due to the great difficulty of lodgment of tubercle bacilli on the larynx from the filtering action of the nose and the action of the ciliated epithelium. In practically all cases the laryngeal lesion follows the pulmonary one, the larynx being secondarily affected only less frequently than the intestinal tract. In Frese's series of four hundred and fifteen cases of phthisis laryngeal tuberculosis was present, he says, in ninety-three, or about 23.5 per cent. Most cases occurred between the ages of twenty and thirty, though no age was absolutely immune. Contrary to the general opinion, women were attacked as frequently as men; in fact, slightly more frequently according to Frese's figures. The most interesting question in these cases is the method of infection. Is the infection of the larynx due to direct infection from the sputum, or are the tubercle bacilli deposited by the lymph or blood channels? The supporters of transmission from the lung by the blood or lymph claim that at times the laryngeal lesions are unilateral, and situated on the same side as a unilateral lung lesion, or if both lungs are infected, on the side most markedly diseased. Frese's experience does not support this view. He found that sometimes the lung lesion is on one side and the laryngeal lesion on the other, and he also calls attention to the great difficulty in bilateral lung lesions of estimating which side is most affected. Another fact often cited in favor of blood or lymph invasion is the fact that the laryngeal lesions

1. Münchener med. Woch., No. 13, 1904.

generally begin beneath the mucosa and not on it. Frese shows by experimental lesions on dogs that where the lesion is due to direct inoculation of tuberculous material on the mucosa, this is also the case. He concludes from these experiments and from his clinical experience that the involvement is due to direct implantation of tubercle bacilli from the infected sputum. The reason why this occurs in the larynx and not in the trachea or larger bronchi is an anatomic one. The shape of the larynx renders it an easy lodging place for sputum, and, in fact, the author states that in examining his cases sputum was often to be seen lodged on the larynx. The non-involvement of the larynx in many cases is due, he thinks, to the great variation in the amount of sputum in different cases, the differences in the number of live bacilli which are found therein, and differences in individual resistance. Where the laryngeal involvement is severe, its effect on the lung lesion is usually bad, the interference with swallowing, the stenosis of the air passages, and the increased chances for aspiration of infective material, all lead, in most instances, to a rapidly fatal termination of the case.

OBJECTIONABLE MEDICAL ADVERTISEMENTS TO BE EXCLUDED FROM THE MAILS.

In another column will be found a note in regard to the proposed movement of the Postoffice Department for the exclusion of objectionable matter from the mails. This means the exclusion of obscene advertisements and all advertisements which misrepresent, or which defraud and deceive the reader. If this is carried out it will be a long step in advance toward purifying current American newspaper advertising literature. The law, which we quote, certainly warrants this action of the postoffice authorities. It is said, moreover, that the movement has the endorsement of the American Newspaper Publishers' Association, and it goes without saying that moralists as well as medical men and other scientists will endorse it most thoroughly. Some opposition may be looked for from certain quarters, but no reasonable objection can be raised against the proposition. This action of the postoffice authorities will also generalize the law which already exists in one or two states, notably in Michigan, against such advertisements. The postoffice is a national affair and has control of the mails. It will be seen that there are severe penalties against such offenses as are noted; in fact, it amounts to a national law against indecent advertising and applies to the whole country without regard to state boundaries. The offense will come before the United States courts, which is also a satisfactory consideration. We hope that its enforcement will be begun immediately and a source of demoralization that now is altogether too general be done away with. A few years ago a Chicago newspaper publisher came under this rule. His offense was an aggravated one, however, and a precedent was not recognized as set for the lesser offenders who were not so glaring in their iniquity. It is unfortunate that Uncle Sam's postal arm does not reach over other means of distributing these fraudulent advertisements than through the mails, but yet this one agency will go a long way toward checking the evil.

Medical News.

DISTRICT OF COLUMBIA.

Columbian Commencement.—On May 25 a class of 52 was graduated from the medical department of Columbian University.

Health of the District.—The report of the health officer for the week ended May 21, shows the total number of deaths to have been 120, and the total number of births 122. At the close of the week there were under treatment 11 cases of diphtheria, 26 of scarlet fever, 56 of typhoid fever and 6 of smallpox.

Large Libel Verdict.—Arthur MacDonald has been granted $20,000 damages against the *New York Sun* for libel and defamation of character. Mr. MacDonald was formerly connected with the Bureau of Education at Washington, dealing and writing principally on the study of children, criminology and socio-pathologic subjects.

ILLINOIS.

Medical Student Dies.—Jesse G. Strobridge, Harvard, a junior in Rush Medical College, died recently in San Diego, Cal., where he had gone in the hope of regaining health.

Langdon Remanded.—Dr. Peter R. Langdon, Kankakee, now under arrest in London on the charge of performing an illegal operation, has been remanded for one week, pending instructions from the Secretary of State.

Personal.—Dr. John A. Pratt, Aurora, will leave for Europe in a few weeks.——Dr. Eugene G. Simpson has been appointed health officer of Naperville.——Dr. Peter S. Weidman, Edwardsville, who retired in 1899, has decided to re-enter practice. ——Dr. Marvel Thomas, Gillespie, has retired from practice.

Chicago.

Chicago Dumping-Ground for Smallpox.—On May 25 a patient with confluent smallpox, who had been sent from Wisconsin, walked into the health office.

Church Gives Tent for Consumptives.—Central Church has devoted the collection of one Sunday to the providing of one home-tent for consumptives at White Head, Colo.

Gives to Catholic Charities.—The late Thomas Brenan, in his will, devised $1,000 each to St. Joseph's Hospital, St. Elizabeth's Hospital, Mercy Hospital, and Alexian Brothers' Hospital.

A Healthy May.—The May mortality of Chicago was the lowest on record, the death-rate was only 13.44 per 1,000 per annum. The average rate for the preceding decade was 15.63 per 1,000, showing a reduction of about 14 per cent.

Unvaccinated Have Smallpox.—The department of health calls attention to the fact that of the 92 cases discovered in Chicago since the first of the year, the most searching examination has failed to find a single one who had been properly or recently vaccinated.

Death Causes.—For the week ended May 28, 437 deaths were recorded, equivalent to an annual death rate of 11.82 per 1,000. Pneumonia caused 55 deaths, or about 12.6 per cent.; consumption, 48; heart disease, 37; Bright's disease, 32; acute intestinal diseases, 29, and violence, 28.

State Board Prosecutions.—The State Board of Health has prosecuted Ottoman etc., Hanish, charged with violating the medical practice act by the use of "torture" needles and "lotus-oil" injections.——A warrant has been secured by the State Board of Health for the arrest of "Dr." August Van Bysterveldt, charged with practicing medicine without a license.

Personal.—Dr. George W. Webster has been appointed by the governor as a delegate to the National Conference of Charities and Corrections to be held in Portland, Maine, June 15 to 22.——Dr. Rudolph Menn has been appointed to fill the vacancy in the surgical staff of Cook County Hospital caused by the death of Dr. Edward H. Lee.——Dr. Joseph Z. Bergeron sailed for Europe, May 31.

MAINE.

Gift to Hospital.—Knox County General Hospital, Rockland, has received a gift of $1,000 from Messrs. Francis and George W. Smith of Warrenton.

Personal.—Dr. and Mrs. John G. Gehring, Bethel, have sailed for Europe.——Drs. Daniel W. Wentworth, Sanford, and Byron M. Moulton, Springvale, have been appointed physicians by the selectmen of Sanford.

Holy Ghoster in More Trouble.—"Rev." Frank W. Sandford, who is now under conviction of cruelty to his son, but is out on appeal, has been further tried and found guilty of manslaughter in causing the death of a 14-year-old boy, by neglect. Sandford is the head of the Holy Ghost and Us Society in Shiloh, Me., claims to be "The Holy Ghost," and exercises absolute authority of life and death in his colony. Many cases of extreme cruelty have been known to the people of the region and led to these trials. This boy was ill with diphtheria, had absolutely no medical treatment, but was required to fast.

MARYLAND.

Personal.—Dr. Arthur E. Sudler, Sudlersville, has been made president of the board of school examiners of Queen Anne County.

Milk Colored with Annatto.—According to the secretary of the State Board of Health, almost all the milk sold is colored with annatto, which is made in Vermont, and is used to render milk yellow. It is said to be harmless in the small quantity—a few drops—needed for this purpose. People will not buy milk unless so colored.

Baltimore.

Deaths and Smallpox.—For the week ended May 28, 194 deaths were reported, and five cases of smallpox were reported.

Toward Hospital Auxiliary.—About $12,000 of the fund necessary to build an auxiliary to the Orthopedic Hospital has been raised.

Personal.—Dr. William Osler will entertain the members of the American Association of Medical Librarians at dinner at the Traymore, Atlantic City, June 6.——Dr. William Lee Howard sails for Europe June 5.

Smallpox Gaining.—Smallpox has been steadily gaining ground. The health commissioner will appoint 25 extra vaccine physicians to assist the health wardens. They will be appointed for two months and will receive $75 each. There have been 18 cases of smallpox here since May 1, and on May 25 there were 15 cases and 15 suspects at quarantine.

Hoffa in Baltimore.—Prof. Albert Hoffa of Berlin, orthopedic surgeon, was in Baltimore, May 27 to 29, as the guest of Dr. R. Tunstall Taylor. He was accompanied by Dr. Hans Spitzy of the University of Gratz. He lectured and operated at the University of Maryland Hospital May 28. He performed a cutting and a bloodless operation for congenital dislocation of the hip, and transplanted tendons for rigid wristdrop in a young child. He is here, it is said, as a commissioner of the German government to study American surgery and orthopedic hospitals.

MASSACHUSETTS.

Hospital Advertises Need.—The Massachusetts General Hospital has made known its need of a further large endowment by the novel method of inserting an advertisement in the daily papers stating the needs of the institution and asking the attention of philanthropic friends.

Brookline Renews Mosquito Crusade.—The Brookline Board of Health has renewed its war on mosquitoes. A large force of men under the direction of the assistant bacteriologist of the town are at work petrolizing the catch-basins. Forty property owners have been notified to fill in mosquito-breeding stagnant pools and have all agreed to do so. Swamps and ponds will be covered by the town authorities themselves.

The Boston City Hospital celebrated its fortieth anniversary, May 24, by opening two new buildings, a surgical out-patient building, to accommodate surgical, genito-urinary, gynecological, throat, ear and eye clinics, and also quarters for the junior house officers in the upper story; and a building containing wards K, L and M, designed for the adequate isolation of cases of infectious diseases, such as erysipelas, cellulitis, dysentery, etc., suspicious eruptions, sunstroke cases and delirious patients. The address of Mr. Sherman, who has been chairman of the trustees for many years, showed that during these forty years the capacity of the hospital has increased four and a half times. The 6,297 patients of the first year were increased to 72,869 last year; the 8,164 out-patients to 108,280; the 203 beds to 935; the staff from 19 to 81; the house officers from 5 to 47; nurses and orderlies from 17 to 206, and the annual appropriations from $76,600 to $476,800.

NEW YORK.

Smallpox.—A number of cases of smallpox are reported from Niagara Falls.

Personal.—Dr. William W. Plummer, Buffalo, sails on a two months' cruise through Norwegian fjords.

Tuberculosis Hospital for Rochester.—The municipal hospital erected a year ago for smallpox patients, but never used for that purpose and since unoccupied, is to be given over to patients with tuberculosis. The hospital is well equipped and has accommodation for about 200 patients. It will be conducted under the direction of the health authorities.

Buffalo's Mortality.—The report for April shows an annual death-rate of 16.51 per 1,000. The principal causes of death were consumption, 45; cerebrospinal meningitis, 8; debility, 50; cancer, 24; apoplexy, 24; meningitis, 13; valvular heart disease, 26; bronchitis, 12; pneumonia, 74; appendicitis, 5; cirrhosis of liver, 5; chronic nephritis, 24; abortion, 4; puerperal septicemia, 4, and violence, 30. The total deaths were 523, as compared to 498 in April, 1903.

New York City.

Medical Officers Get Increased Rank and Pay.—The medical officers of the fire department of Greater New York have been made members of the uniformed force, with rank of battalion chief and pay of $3,000 a year.

Recreation Piers Open.—The recreation piers along the river fronts have been opened for the season. There are 17 attendants at each pier, 6 women and 11 men. A physician from the board of health is also detailed at each pier.

Emergency Tents in Parks Open.—The emergency tent stations for Van Cortlandt, Bronx and Pelham Bay parks have been opened. Victims of accidents, sunstroke, drowning, etc., will here receive first-aid. Competent men will be in charge of the tents.

Personal.—Dr. Darlington, health commissioner, is making a ten days' trip to St. Louis, Chicago and Buffalo, to study the methods of those cities in caring for public health. Chicago is said to have a cheaper method of handling refuse and Buffalo a cheaper ambulance system.——Dr. Edward T. Higgins has been appointed police surgeon at an annual salary of $3,000.

OHIO.

Railway Surgeons Elect Officers.—The Society of C., H. and D. Railway Surgeons, at its annual meeting at Dayton, May 26, elected the following officers: President, Dr. Millard F. Hussey, Sidney; vice-president, Dr. Charles E. Beardsley, Ottawa; secretary, Dr. Mark Millikin, Hamilton, and treasurer, Dr. W. E. Thesing, Cincinnati.

New Operating Building Opened.—The new operating building of the Miami Valley Hospital, Dayton, was dedicated May 26. Mrs. Frank J. Patterson, who gave the institution in memory of her husband, made the address, which was responded to by Dr. Henry F. Colby. The building and its equipment are said to be among the most modern and complete in the United States.

Personal.—Dr. and Mrs. Edward F. Cushing, Cleveland, have sailed for Europe.——Dr. Abraham S. Metzler, Baltic, 70 years of age, was assaulted at Coshocton by five men who tried to rob him, but by strength and courage he beat off his assailants.——Dr. George W. Cullen, Cincinnati, has been commissioned first lieutenant and assistant and assigned to the First Infantry.——Dr. Chester C. Kirk, Columbus, has succeeded Dr. Jeremiah H. Metzger as assistant physician at the Toledo State Hospital.——Dr. David J. Matthews, Zanesville, has been commissioned first lieutenant and assistant surgeon and assigned to Ambulance Company No. 2, Zanesville.——Dr. and Mrs. H. Wilbur Cooper, Steubenville, have returned from Europe.

Hydrophobia Scare in Gallia County.—Rumors of rabies among the dogs of Gallipolis and vicinity were confirmed May 22, when the laboratory evidences of rabies were discovered in a dog which had severely bitten a young lad. The examinations were made in the pathologic laboratory of the Ohio Hospital for Epileptics located at Gallipolis, and the positive indications of the Van Gehuchten-Nelis histologic test were confirmed by the finding of stones, straw, etc., in the dog's stomach, and by the subsequent history of the canine's actions. The injured boy was sent to the Pasteur Department of the University of Michigan for preventive treatment. As several other dogs were bitten by the rabid animal the authorities of Gallipolis fear endemic rabies, and are taking stringent precautionary measures.

Many New Doctors.—The Medical College of Ohio, Cincinnati, graduated the largest class of the year, May 25, when 46 received diplomas, 19 of whom won hospital appointments. Dr. Joseph L. Ransohoff was awarded the faculty gold medal.

——Starling Medical College, Columbus, held its seventy-fifth annual commencement, May 3, and conferred diplomas on a class of 34.——Cleveland College of Physicians and Surgeons, of the Ohio Wesleyan University, awarded diplomas to a class of 18, May 4.——A class of 41 was graduated from the Ohio Medical University, Columbus, April 28.——At the twenty-third annual commencement of Toledo Medical College, 7 were given diplomas.——Miami Medical College, Cincinnati, on June 1, graduated a class of 27, of whom 5 were students in the Laura Memorial College, before its merger.

The State Association.—On May 10 the Ohio State Medical Association was incorporated at Columbus to federate the entire medical profession of the state by Charles S. Hamilton, Starling Loving, N. R. Coleman, D. N. Kinsman, T. W. Rankin, E. J. Wilson, W. D. Hamilton, and Frank Winders. The fiftieth annual meeting of the association was held in Cleveland, May 18, 19 and 20. The following officers were elected: President, Dr. Stephen S. Halderman, Portsmouth; vice-presidents, Drs. John S. Deemy, Bellefontaine, William E. Morris, Lisbon, and Adam H. McCollough, Mansfield; secretary, Dr. Frank Winders, Columbus; councilor, First District, Dr. Brooks F. Beebe, Cincinnati; councilor, Fifth District, Dr. T. Clarke Miller, Massillon, and delegates to the American Medical Association, Drs. John P. Sawyer, Cleveland, Jacob F. Marchand, Canton, and Thomas Hubbard, Toledo. Columbus was selected as the meeting-place for 1905.

PENNSYLVANIA.

Philadelphia.

Faure Holds Clinic.—Dr. J. L. Faure, the eminent French surgeon, conducted a clinic in the Jefferson Hospital on May 24, by request of Dr. W. W. Keen. He operated on a case of fecal fistula following appendicitis.

Hospital Appointments.—The following have been appointed to the resident staff of the Jefferson Medical College Hospital: Drs. J. H. Anderson, Louis Chodoff, E. W. Stevenson, Earle McLean, O. L. Wingate, F. C. Leytze, Atlee D. Mitchell and E. J. Porteus.

Sailed for Europe.—Dr. Charles F. Nassau sailed May 28. He will be absent about six weeks.——Dr. Gwilym M. Davis sailed May 28. He intends to study with Professor Bassini in Italy. ——Dr. E. Carlton Palmer sailed June 4. He will spend several months traveling on the Continent.

Class Reunion.—The class of 1894, Jefferson Medical College, held its first reunion in this city May 28. A permanent organization was effected, and the following officers were elected: President, Dr. William H. King; vice-president, Dr. Randall C. Rosenberger, and secretary and treasurer, Dr. Ward A. Brinton. It was decided to hold a reunion every five years.

Health Report.—Typhoid continues to decrease. There were only 120 cases reported for the week ended May 28, or 62 less than for the preceding week. There was a reduction of 23 cases of infectious disease and of 8 deaths, as compared with the previous week. Deaths from all causes numbered 494. This is an increase of 17 over the previous week.

Chemical Treatment of Water Unreliable.—Dr. Edward Martin, director of the department of health, has received from Dr. A. C. Abbott, chief of the health bureau, a review of the work done with chemicals in rendering water bacteria-free. He concludes that thus far this method can not be relied on. Chemical disinfection may, however, be resorted to until the city filter beds are completed.

Commencements.—At the seventy-ninth annual commencement of Jefferson Medical College, May 27, 165 young men were graduated. This brings the total number of graduates to 11,640; 26 different states were represented. The graduating class was addressed by George F. Baer, president of the board of trustees of Franklin and Marshall College. Ninety-three members of the graduating class secured hospital appointments in competitive examination. The annual commencement of the medico-chirurgical College was held May 29, when 70 medical degrees were conferred. The doctorate oration was delivered by President Swain of Swarthmore College. In the medical graduates ten states were represented.

Hoffa in Philadelphia.—Dr. Albert Hoffa of the University of Berlin conducted a clinic in conjunction with Prof. H. Augustus Wilson, in Jefferson Medical College Hospital, May 25. Dr. Hoffa and his assistant, Dr. Hans Spitzy, were the guests of honor at the annual reception of the Jefferson Alumni Association in the evening. On May 26 Dr. Hoffa, by special request, conducted another clinic in the Jefferson Hospital. He performed two operations, one for paralysis of the arm, in a girl of 18, and another for coxalgia in a boy of 14. At the commencement of the Jefferson Medical College the honorary degree of LL.D. was conferred on Professor Hoffa. On June 6 he will hold a clinic on congenital dislocation of the hip in the Jefferson Hospital for the benefit of visiting members of the American Medical Association.

SOUTH CAROLINA.

County Election.—At the annual meeting of the Sumter County Medical Association, May 26, the following officers were elected: President, Dr. Julius A. Mood, Sumter; vice-presidents, Drs. William R. Mood, Summerton, and Charles P. Osteen, Sumter, and secretary and treasurer, Dr. Van Telburg Hofman, Sumter.

Colored Physicians Meet.—The Palmetto Medical Association held its eighth annual meeting at Florence, April 28. The following officers were elected: Dr. John M. Thompson, Charleston, president; Drs. I. A. Macon, Rock Hill, and J. Henry Alston, Summerville, vice-presidents; Dr. C. W. Birnie, Sumter, secretary, and Dr. William D. Crum, Charleston, treasurer.

Faculty Changes.—At the meeting of the trustees of the medical college of the State of South Carolina, Charleston, May 14, the following changes were made: The chair of clinical surgery and surgical pathology was abolished, and the chair of gynecology and abdominal surgery created, Dr. Manning Simons being elected to fill it; the chair of the practice of medicine and nervous diseases was established, Dr. Robert Wilson being assigned to it; the chair of obstetrics and diseases of children was created with Dr. Lane Mullally in charge; the chair of clinical and minor surgery was established, and Dr. A. Johnston Buist elected to fill it; the chair of physiology and clinical diseases of the eye, ear, nose and throat was established, to be filled by Dr. Edward F. Parker.

TENNESSEE.

Personal.—Dr. Hugh W. Tate, Bolivar, fell off a train recently and fractured a rib.——Dr. James J. Neely, Bolivar, has been promoted to the position of superintendent of the Western State Hospital for the Insane, Bolivar, and Dr. W. S. Cook, Whiteville, assistant superintendent.

Smallpox.—A deputy sheriff and his posse arrested 40 persons at a railroad camp near Clarksville, for violation of the quarantine law, by utter disregard of the orders of a physician who was attending a smallpox patient. Nine who had been exposed were vaccinated and the others were released.——Knox County now has more than thirty cases of the disease.

Many Receive Diplomas.—The fifteenth annual commencement of Tennessee Medical College, Knoxville, was held May 23, a class of eleven receiving diplomas from the dean, Dr. Charles McNabb. The doctorate address was delivered by Charles H. Brown, LL.D.——Knoxville Medical College graduated a class of six May 23. Rev. W. H. Franklin delivered the address of the evening and Dr. William H. Moore, dean of the faculty, presented the diplomas.

VIRGINIA.

Fined for Practicing Without License.—J. Wesley Colles, prosecuted at the instance of the Norfolk Medical Society, was fined $50 for practicing without a certificate from the state board.——Dr. J. T. Green, Bristol, was fined $50 for practicing medicine without a license.

More New Physicians.—University College of Medicine, Richmond, held its annual commencement, May 12. President Henry Louis Smith of Davidson College, N. C., delivered the doctorate address, and diplomas were awarded to a class of 25. ——The Medical College of Virginia, Richmond, held its sixty-sixth commencement exercises, May 10. Allen Caperton Braxton of Staunton delivered the address of the evening.

Personal.—Dr. Benjamin L. Dillard, Alberene, was thrown from his buggy in a runaway accident and broke his leg below the knee.——The office of Dr. John F. May, Waverly, was among the buildings destroyed in the fire, May 17, which caused a loss of $60,000.——Dr. John H. Claiborne, Petersburg, has been appointed surgeon general of the Grand Camp of Confederate Veterans of Virginia, vice Dr. John S. Powell, Occoquan, deceased.

WISCONSIN.

Scarlet Fever in Wauwatosa.—The prevalence of scarlet fever in Wauwatosa has caused the closure of the first district school and the quarantining of the infected portion of the town. The health officers claim that the law has been flagrantly violated.

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Personal.—Dr. Joshua C. Noyes, Oshkosh, fell in his house, May 20, and fractured his right femur.——Dr. William A. Prouty has been elected city physician of Burlington.

Caught in the Act.—"Dr." William E. Aubin, Racine, was arrested, May 23, while in the act of making counterfeit coins at his house. He said he was experimenting, but was held to await the action of the grand jury, under bond of $2,500. "Dr." Aubin pleaded guilty and was sentenced on May 31 to eighteen months' imprisonment in the Milwaukee House of Correction.

New Doctors in Wisconsin.—Wisconsin College of Physicians and Surgeons, Milwaukee, graduated a class of 29, May 26. Dr. Arthur J. Burgess delivered the doctorate address, and Dr. A. Hamilton Levings, the president, conferred the degrees. ——A class of 23 was graduated from Milwaukee Medical College, April 30. Dr. William H. Earles, the president, conferred the degrees.

GENERAL.

Yellow Fever at High Elevations.—Dr. L. P. Howard, entomologist of the Department of Agriculture, who has been investigating the subject in Mexico, believes it possible for yellow fever to occur on the higher levels which have been considered not liable to the disease.

No Appeal from Naval Medical Board.—Hereafter neither the President nor the Navy Department will entertain appeals from applicants for admission to the Naval Academy who have been rejected by the medical examining board for physical disabilities. In the past considerable confusion has arisen from such protests.

New York and Pennsylvania Transfers.—Dr. Henry Beates, president of the State Medical Examining Board, has announced that the board will give full credit in the Pennsylvania examinations for preliminary examinations taken in New York State. This act had been withdrawn, but now transfers will once more be recognized.

Insane Hospital Interne Wanted.—The United States Civil Service Commission announces an examination, June 29-30, 1904, in various cities, for two medical internes in the Government Hospital for the Insane, Washington, D. C., at $600 per annum each, and for other similar vacancies as they may occur in that hospital. Further particulars may be had from the United States Civil Service Commission, Washington, D. C., or from the secretary of a local board of examiners.

Objectionable Medical Advertisements to be Excluded from Mails.—The Post-Office Department has determined to rid the mails of objectionable and offensive advertisements. Those advertisements which are of an offensive nature will be excluded for violation of law as violating decency, and those which advertise fake preparations will be excluded on the ground of fraud on the public. All drugs and nostrums will be referred to the Department of Agriculture for analysis to determine the sincerity of their medical claims, and the data in all cases will be finally referred to the Law Department for final action. The action in this particular has received the approval and has the co-operation of the American Newspaper Publishers' Association and a large number of medical men and scientists. The attorney for the Post-Office Department has held that any contract for advertisements of such objectionable matters is void when the Post-Office Department has passed adversely on the character of the advertisement. This decision will materially assist newspapers and publishing houses against suits for failure of contract to publish such advertisements when the Post-Office Department declares the matter objectionable and excludes it from the mail. The law in the matter is very broad, and is herewith appended:

UNMAILABLE MATTER.

Every obscene, lewd, or lascivious book, pamphlet, picture, paper, letter, writing, print, or other publication of an indecent character, and every article or thing designed or intended for the prevention of conception or procuring of abortion, and every article or thing intended or adapted for any indecent or immoral use, and every written or printed card, letter, circular, book, pamphlet, advertisement or notice of any kind giving information, directly or indirectly, where or how, or of whom, or by what means any of the hereinbefore mentioned matters, articles, or things may be obtained or made, whether sealed as first-class matter or not, are hereby declared to be non-mailable matter, and shall not be conveyed in the mails nor delivered from any post-office nor by any letter-carrier; and any person who shall knowingly deposit, or cause to be deposited, for mailing or delivery, anything declared by this section to be non-mailable matter, and any person who shall knowingly take the same, or cause the same to be taken, from the mails for the purpose of circulating or disposing of, or of aiding in the circulation or disposition of the same, shall, for each and every offense, be fined on conviction thereof not more than five thousand dollars, or imprisoned at hard labor not more than five years, or both, at the discretion of the court. And all offences committed under the section of which this is amendatory, prior to the approval of this act, may be prosecuted and punished under the same in the same manner and with the same effect as if this act had not been passed: Provided, That nothing in this act shall authorize any person to open any letter or sealed matter of the first class not addressed to himself.

In a letter to our correspondent the first assistant postmaster-general says that "the question of admission to the mails of newspapers containing medical advertisements treating of private and disgusting diseases, and offering for sale medicines designed for unlawful purposes, has already been considered by the department, and it has been decided that such advertisements are forbidden circulation in the mails by the act of Congress which declares to be unmailable 'any print or other publication of an indecent character, and every article or thing designed or intended for the prevention of conception.' On presentation to the department of any advertisement such as above described, the same will be duly considered and appropriate action taken."

CANADA.

Cambridge Recognition.—Cambridge University has granted recognition to the medical course of Queen's University, Kingston, Ont. Medical students at the latter institution, after spending one, two or three sessions there, may complete their course at Cambridge, full allowance being made for the full time they have put in at Queen's.

Appointments at McGill.—The following appointments have been recently made in the medical faculty of McGill University: Dr. R. Tait Mackenzie, lecturer in anatomy; Dr. A. A. Robertson, lecturer in physiology; Dr. W. G. M. Rogers, lecturer in ophthalmology; Dr. J. W. Scane, lecturer in pharmacology and therapeutics; Dr. W. S. Morrow, associate professor of physiology; Dr. A. G. Nichols, associate professor of pathology and bacteriology.

Personal.—Dr. and Mrs. William Osler and family, Baltimore, will spend the summer at Murray Bay, Quebec. Others who will be at Murray Bay this season are Drs. Beech-Jones, New York City; Hunter Robb, Cleveland, Ohio, and Johnson, Montreal.——Dr. Harry J. Watson, formerly of Toronto and Ottumwa, Iowa, later of the United States Army, at Manila, has commenced practice in Winnipeg, Man.——Dr. J. W. Harris, of Toronto General Hospital, has been appointed relieving physician to the provincial insane asylums.——Dr. Charles E. Dogherty, assistant medical superintendent for the hospital for insane at New Westminster, B.C., has resigned, to become superintendent of the hospital at the mining camp at Ymir.——Drs. A. B. MacCallum and Wesley Mills, respectively professors of physiology at Toronto and McGill universities, have gone to Europe for the summer.

FOREIGN.

Nicaragua Quarantines Peru.—The Pacific ports of Nicaragua have been closed against ships from Callao, at which point bubonic plague exists.

Isolation of Consumptives.—The authorities at Breslau in charge of public hospitals have decided to rent a separate room for a consumptive in case it is deemed best to remove him from the family environment.

Public Hospital for Venereal Diseases.—Berlin has set apart a building with arrangements for 120 beds, to serve as a hospital for men and women (not prostitutes), who have to be treated for venereal diseases. This is the second special station for these affections.

Professors of Radiology.—Vienna has taken the lead in inaugurating a chair of radiology in the medical faculty. Dr. Leopold Freund, Dr. Robert Kienböck and Dr. Guido Holzknecht have been appointed privat docents in the new branch. The two latter have long been official x-ray medicolegal experts for Austria.

Renovation of the Berlin Charite.—May 15 the new surgical ward in charge of Franz König was formally inaugurated with due ceremony. The authorities have spared no pains to make this a model clinic in every respect, and to testify their appreciation of König's skill and record, a portrait bust is to be placed at the entrance.

New Physiologic Institute at Vienna.—Our Vienna exchanges comment with delight on the opening of the new building on the site of the old institute, the scene of Brücke's labors. The new institute is proving a model one, admirably adapted for its purpose, and was erected without unnecessary delay and at a minimum of expense. The entire cost of the building and equipment was only about $125,000. The air entering the amphitheater is forced through filters and artificially supplied with moisture.

Street Named After Liebeault.—The street at Nancy where Liébeault lived until his death last February, has been named after him, and will be known henceforth as Rue du Docteur Liébeault. He was the founder of the Nancy school of hypnology, and was in his eighty-second year at the time of his death.

Tribute to Ehrlich.—On his return from America recently, Ehrlich was presented with a portrait medallion, the work of a well-known sculptor. The subscriptions had been collected by a group of sixty-five pupils and co-workers. He has been honored with the title of privy councilor, and is entitled to write "von" before his name. The occasion of the presentation was his fiftieth birthday, which occurred May 15.

Semicentennial of French Society of Medical Hydrology.—After a formal session the members of the society and its guests adjourned to a banquet to duly celebrate its semicentennial. Only one of the original founders of the society still survives, and he occupied the presidential chair. Most of the physicians of the watering-places throughout France belong to the society, which also includes a large number of general practitioners elsewhere, who wish to keep posted in regard to health resorts. Italy has also a similar society, modeled on the French one. The sixth annual study trip to the watering-places of France will start this year September 3 and disband September 15. It is in charge of Dr. Carron de la Carrière, 2 rue Lincoln, Paris. The watering-places of Vichy, Pougues and Lioran are on the list of places to be visited.

Return of Rieder from Turkey.—Six years ago Professor Rieder was invited to go to Turkey and organize a system of medical instruction there on a scientific basis. He was made chief medical inspector for the entire country, and inaugurated a number of important reforms. Four years ago he met with an accident affecting the spine, and is still suffering from its effects. He has resigned his position, and returns to Germany at the end of the school year, leaving the model Gülhane hospital in charge of his assistant, Professor Deycke. No one has been found to fill his place as president of the medical college. THE JOURNAL has occasionally reviewed the results of Rieder's work in Turkey as he has published them, and von Düring's communications on the subject of the amazing amount of syphilis in Asia Minor. Rieder's data and experiences have been collected in a large book just published entitled "Für die Turkei. Selbstgelebtes und Gewolltes."

Endemic Diseases in Japan.—Leprosy, smallpox, syphilis and ulcers, known as "ka-sa" in Japanese, are the four endemic contagious diseases of Japan. There are about 3,500 lepers in the total population of 35,000,000, and no attempt is made to isolate them. Smallpox is placarded by the family with a special sign, although there is no ordinance to compel it. Syphilis is about as common as in Europe, but severe tertiary accidents are rarely seen. Meyners d'Estrey, in an article in the *Revue Médicale du Canada* of May 4 attributes this benignity of the disease to the salubrious climate. He has observed that tertiary lesions are much more common and serious in Java where the climate is much hotter and more humid. This difference can not be ascribed to more intelligent medical care as until comparatively recently the physicians of Japan had not acquired a scientific knowledge of medicine. The practical study of anatomy has also been rendered very difficult by the laws and religious prejudices. Every two or three years the mikado would allow the autopsy of a criminal. On one of these occasions sixty-five physicians assembled from all parts of the empire. The operative skill of Japanese surgeons, with their hitherto meager anatomic knowledge is wonderful, and promises great surgical dexterity for the Japanese in time. An article on Japan's medical work in Formosa, written by a Japanese physician, was reviewed recently in these columns, page 931.

Correspondence.

Instruction in Psychiatry.

PHILADELPHIA, May 28, 1904.

To the Editor:—In your editorial of to-day's issue of THE JOURNAL on "Instruction in Psychiatry," you failed to make any mention of the instruction which has been given for a number of years past in the Jefferson Medical College of Philadelphia. In the session of 1897-98 a systematic course, clinical and didactic, was given by myself, extending over the college term, beginning in the fall and continuing until the close of the college session; this course was voluntary. In the following year, that is in the session of 1898-99, attendance on these lectures became obligatory. In 1900 neurology and psychiatry were elevated to the position of a major branch, and an examination was required at the end of the session. The instruction is both didactic and clinical, the large number of cases in the insane department of the Philadelphia Hospital yielding abundant material for the work.

The examinations in psychiatry have been conducted with the examinations in neurology; six-tenths of each examination being devoted to neurology and four-tenths to psychiatry. As examples of the kind of questions asked at these examinations, I cite the following:

Enumerate the forms of mental disease which occur as sequelæ of typhoid fever.
What is dementia præcox? Into what forms is it divided? In what respects do the various forms differ from each other?
Enumerate the forms of nervous and mental disease produced by alcohol.
Describe the symptoms of melancholia. Give the differential diagnosis between melancholia and the depressive form of paresis.
Give the symptoms of delirium. Give the symptoms of mania.
What are the principal forms of paresis? Enumerate the more common physical signs of paresis.
Give the differential diagnosis between melancholia and paranoia.
Describe the symptoms of mania. What is the differential diagnosis between hypomania and the expansive stage of paresis?
Describe hebephrenia.
Describe circular insanity.
Describe paranoia.
Describe confusional insanity.

I may be permitted to add that for a number of years no student has passed through Jefferson College without having seen numerous cases of every one of the more common forms of mental disease, as well as instances of many of the rarer affections. One hour weekly is devoted to didactic instruction and one hour to clinical demonstrations. In this teaching I have the able assistance of Dr. William Pickett. The instruction in psychiatry is, of course, entirely apart from the instruction in neurology.

F. X. DERCUM, M.D.,
Professor of Neurology and Psychiatry in the Jefferson Medical College.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

PATENT MEDICINE ADVERTISING IN MAGAZINES.

DR. D. E. HILLS, Detroit, has had correspondence with *Everybody's Magazine* on the subject mentioned in THE JOURNAL, May 21, page 1367. He received the circular letter referred to and replied thereto, calling attention to objectionable advertisements. The reply of the publishers was of a very different tone from that which Dr. Todd received. They said that they would look into the merits of the Morley ear drum more carefully and that if the claims for it could not be substantiated, the wording of the advertisement would have to be changed or it would not be published. Dr. Hills remarks that in the June number of this magazine the advertisements of Madame Hessler, the ocularscope and the cartilage company do not appear. He suggests that the proprietors appear to be sincere in their efforts to cleanse their advertising pages from objectionable matter.

Marriages.

FRANK PEARCE, M.D., to Miss Summers, both of Tennessee.

ERNEST VAN COTT, M.D., to Miss Clara Bailey, both of Salt Lake City.

SETH DELMER DICE, M.D., to Miss Mary Little, both of Xenia, Ohio, May 25.

FRANCIS C. PACHE, M.D., to Miss Atola Wagner, at Ogden, Utah, May 11.

CHARLES LEONARD PARKHURST, M.D., to Miss Mary D. Bell, both of Houstonia, Mo.

JOHN D. WAKEFIELD, M.D., to Miss Mary Brock, both of Loveland, Ohio, May 19.

MICHAEL T. COLLINS, M.D., to Miss Maude Bosserman, both of Sedalia, Mo., May 19.

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RICHARD HENRY LEE, M.D., to Miss Florence Leonard, both of Kansas City, Mo., May 11.

GILMAN WILBERT PETIT, M.D., to Miss Harriette Mae Glover, both of Chicago, May 24.

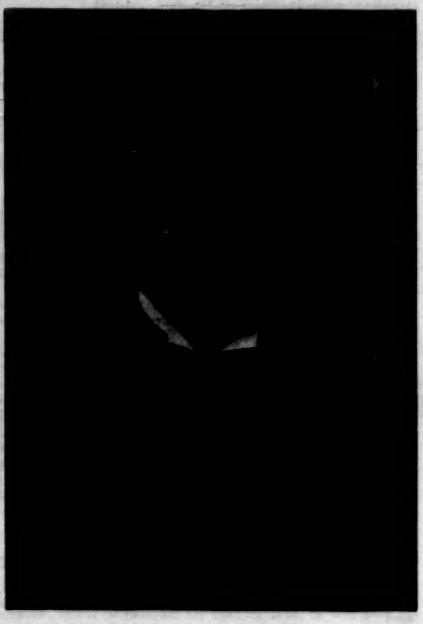
SAMUEL WATSON TSUITT, M.D., San Francisco, to Miss Edna Reinhardt of Missouri, at San Francisco, May 8.

ALBERTUS BENTLEY NICHOLS, M.D., Wheeling, W. Va., to Miss Rose Clarissa Gallagher of Wilkesbarre, Pa., at Ellicott City, Md., April 9.

Deaths.

Ralph N. Isham, M.D.

Ralph Nelson Isham, M.D., one of the oldest and best-known surgeons in Chicago, died, May 28, at the home of his daughter in Lake Forest, from cancer of the stomach, aged 73 years. He was born in Manheim, N. Y., March 16, 1831, received his preliminary education at Herkimer Academy, Little Falls, N. Y.,



RALPH NELSON ISHAM, M.D.

and his medical degree from Bellevue Hospital Medical College, New York City, in 1854. He then served as house physician and surgeon in Bellevue Hospital, and after a trip abroad, settled in Chicago in November, 1855, and made it his permanent field of practice.

In 1859 he joined with Drs. N. S. Davis, John H. Hollister and the late Dr. Edmund Andrews in the organization of the medical department of Lind University, which was later known as Chicago Medical College, now Northwestern University Medical School. In this institution he filled for many years the chair of surgical anatomy, operative surgery and surgery. During the Civil War he was one of the organizers and served as a member of the U. S. Sanitary Commission. He twice went South with supplies and physicians, and was in the field of the battle of Shiloh. In 1862 he was appointed by President Lincoln surgeon in charge of the Marine Hospital, Chicago, which was then a military hospital, and continued in charge of this institution for several years after the war. He was surgeon of the Jewish Hospital, trustee of the North Star Dispensary, chief surgeon of the Chicago & Northwestern Railway Co., consulting surgeon to Cook County, Presbyterian and Passavant hospitals, a delegate to the International Medical Congress in London, in 1881, and major and surgeon of the First Infantry, Illinois National Guard, etc.

He was a member of the American Medical Association, a life member of the Chicago Medical Society, and an honorary member of the New York Medical Society. He also received honorary degrees from the University of the City of New York and the Northwestern University.

He was in active practice until about six years ago, when he retired, and since that time has spent much of his time in travel. Dr. Isham was noted for his erudition, both in and out of the medical profession, and possessed what is said to be one of the finest private libraries in Chicago.

F. Savary Pearce, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1891, one of the most prominent young neurologists of Philadelphia; a member of the American Medical Association from 1899 to 1903, inclusive, secretary, and at the time of his death, chairman of the Section on Nervous and Mental Diseases; a member of the Medical Society of the State of Pennsylvania, Philadelphia County Medical Society, Philadelphia Neurological Society, Philadelphia Pathological Society, and Eastern Ohio Medical Association; a fellow of the College of Physicians of Philadelphia, and treasurer of the Philadelphia Medical Club; professor of nervous and mental diseases in the Medico-Chirurgical College of Philadelphia; neurologist to the Philadelphia and Howard hospitals, died at the home of his parents in Steubenville, Ohio, May 27, from nervous collapse, due to persistent overwork, aged 36. His portrait appears in the supplement to this issue of THE JOURNAL among the section officers. His latest contribution to the literature was his "Practical Treatise on Nervous Diseases," which appeared in March of this year. In last week's issue of THE JOURNAL it was noted that Dr. Pearce had gone away for rest to his parents' home in Steubenville.

Thomas Murray Drysdale, M.D. Pennsylvania Medical College, Philadelphia, 1852, a member of the American Medical Association since 1873; one of the founders of the American Gynecological Society; member of the Philadelphia County Medical Society since 1853, vice-president in 1875, and president in 1876; member of the Medical Society of the State of Pennsylvania since 1864, and corresponding secretary in 1873-1874; vice-president of the American Academy of Medicine in 1882; member of the International Medical Congress in 1876; member of the Philadelphia Pathological Society; member, vice-president, and twice president of the Philadelphia Obstetrical Society; member of the Philadelphia College of Physicians and of the British Medical Association; surgeon of the First Pennsylvania Volunteer Infantry in the Civil War; consulting surgeon to Girard College; consulting gynecologist to the Medico-Chirurgical Hospital; died at his home in Philadelphia, May 26, from pneumonia, aged 72.

Henry Downer Ingraham, M.D. University of Buffalo Medical Department, 1866, a member of the American Medical Association, Medical Society of the State of New York, American Association of Obstetricians and Gynecologists, and other societies; gynecologist to three hospitals in Buffalo; professor of practice of medicine in the University of Buffalo from 1898 to 1902, died at his home in Buffalo, May 23, after a protracted illness, aged 62.

Frederick C. Leber, M.D. University of Louisville, 1864, surgeon of the Fifty-fourth Kentucky Volunteer Infantry in the Civil War, president of the Louisville School Board in 1891, professor of theory and practice of medicine in the Kentucky School of Medicine, died at his home in Louisville, May 18, from Bright's disease, after an illness of three months, aged 70.

Edwin Galliard Mason, M.D. Bellevue Hospital Medical College, New York City, 1887, of New York City, assistant professor of nervous diseases of the New York Polyclinic; for eight years editor of *Galliard's Medical Journal;* since 1900 vice-president of the New York County Medical Society, died at his father's home in Hagerstown, M.D., May 24, aged 39.

Philander Daugherty, M.D. Rush Medical College, Chicago, 1886, a member of the American Medical Association; mayor of Junction City, Kan., in 1897 and 1898; representative in the state legislature from Geary County in 1892; health officer of Junction City for several years, died at his home in that place, May 23, from apoplexy, aged 70.

Reginald Henwood, M.D. College of Physicians and Surgeons of Toronto, 1877, of Ontario, died, May 22, at his home in Brantford, aged 76. He secured his provincial license to practice in Ontario in 1846, and for more than fifty years practiced at Brantford, retiring in 1900. He was mayor of the city in 1882 and 1883.

Peter Evans Griffin, M.D. University of Pennsylvania, Philadelphia, 1855, surgeon of the Third Regiment South Carolina State Troops in the Civil War; for 13 years superintendent of the State Hospital for the Insane, died at his home in Columbia, S. C., May 18, from paralysis, aged 73.

Jared W. Daniels, M.D., Massachusetts, 1854, a pioneer of St. Peter, Minn., surgeon of the Sixth Minnesota Volunteer Infantry in the Civil War, who retired from practice in 1888, died at his home in Los Angeles, Cal., May 10, from pneumonia, after an illness of five days, aged 76.

Robert Johnston, M.D. Medical College of Ohio, Cincinnati, 1862, surgeon of the One Hundredth Ohio Volunteer Infantry in the Civil War, and for two months a prisoner in Libby Prison, died suddenly from apoplexy at his home in Milford, Mich., May 14, aged 65.

Robert Henry Stirling, M.D. University of Maryland, Baltimore, 1850, acting assistant surgeon, U. S. Army during the Civil War, died suddenly at his home in Baltimore, May 24, from heart disease, aged 67. He retired from practice in 1876.

Merritt Hard Cash Vail, M.D. New Jersey, 1853, surgeon of the First New Jersey Volunteer Infantry in the Civil War, of Long Beach, Cal., died suddenly from paralysis at the Deaconess Hospital, Los Angeles, May 19, aged 75.

David P. Jackson, M.D. College of Physicians and Surgeons, New York City, 1865, for several years coroner of Broome County, N. Y., and health officer of Binghamton, died at his home in that city, May 23, aged 63.

George W. Weems, M.D. University of Maryland School of Medicine, Baltimore, 1854, surgeon in the confederate service during the Civil War, and in the Crimean War, died at his home near Huntsville, Mo., May 13.

William W. Wickham, M.D. McGill University Medical Department, Montreal, 1895, of Tignish, P. E. I., died at Ste. Agathe, Quebec, where he had gone three months ago in search of health, on May 14, aged 36.

Charles Warren White, Jr., M.D. Bellevue Hospital Medical College, New York City, 1885, died at his home in Fairhaven, Mass., May 15, after an illness of one day, following an emergency operation, aged 44.

A. E. Williams, M.D. Medical College of the State of South Carolina, Charleston, 1854, a veteran of the Civil War, died at his home in Cottageville, S. C., May 18, after a long period of ill health, from paralysis.

Theodore C. West, M.D. College of Physicians and Surgeons of Chicago, 1900, of Troy, Idaho, died at Lidgerwood Sanitarium, Spokane, Wash., May 15, from typhoid fever, after an illness of three weeks.

W. O. Alexander, M.D. University of Georgetown (D. C.) Medical Department, died at his home in Washington, D. C., from organic heart disease, May 23, after an illness of several months, aged 57.

Frank P. Blair, M.D. Albany (N. Y.) Medical College, 1877, of Allegany, N. Y., died at the Olean General Hospital, May 21, two days after an operation for malignant disease of the bladder, aged 61.

Asa H. Tyler, M.D. assistant surgeon of the Sixty-eighth Ohio Volunteer Infantry in the Civil War, died at his home in Napoleon, Ohio, May 23, from Bright's disease, after a short illness, aged 85.

James M. McNutt, M.D. Washington University School of Medicine, Baltimore, 1869, an ex-Confederate soldier, died at his home in Eastville, Va., May 23, by poisoning from wood alcohol, aged 60.

William C. Burden, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1876, formerly president of the Rice County (Kan.) Medical Association, died recently at his home in Sterling, aged 52.

Bushnell A. Wright, M.D. Ohio, 1873, for nine years superintendent of the Toledo (Ohio) State Hospital, died suddenly at his home in Los Angeles, Cal., May 17, from cardiac neuralgia, aged 81.

Tyler W. Richmond, M.D. University of Michigan, Ann Arbor, 1874, postmaster of Bear Lake, Mich., for twelve years, died at his home in that place, and was buried May 15, aged 56.

Robertson Harmon, M.D. University of California Medical Department, San Francisco, 1879, died suddenly at his office in Oakland, Cal., May 19, from fatty degeneration of the heart.

Chauncey Howard Kinnaman, M.D. Jefferson Medical College, Philadelphia, 1886, died at his home in Cleveland, Ohio, May 22, from heart disease, after a long illness, aged 46.

Thomas J. Fitzmaurice, M.D. Bellevue Hospital Medical College, New York City, 1893, an alderman of Paterson, N. J., died at his home, May 20, from liver disease, aged 35.

Lewis B. Andrews, M.D. University of Buffalo Medical Department, 1885, died at his home in Rochester, N. Y., May 21, from pneumonia, after an illness of two weeks, aged 40.

Herbert C. Featherston, M.D. McGill University Medical Department, Montreal, died from pleuro-pneumonia, after a long illness, April 8, at his home in Toronto, aged 25.

Delavan E. Walker, M.D. University of Buffalo (N. Y.) Medical Department, 1882, died at his home in Dion, N. Y., May 18, after an illness of several months, aged 49.

Rolland T. Dean, M.D. Medical College of Ohio, Cincinnati, 1872, died at his home in New Sharon, Iowa, May 22, from apoplexy, after an illness of ten days, aged 81.

Richard G. Lightle, M.D. Kentucky School of Medicine, Louisville, 1896, was burned to death in his barn, in Searcy, Ark., May 22, by the explosion of a lamp, aged 32.

Francis X. Patoel, M.D. Trinity Medical College, Toronto, 1872, died at his home in Willimansett, Mass., May 11, from bronchitis, after a short illness, aged 58.

James M. Waddell, M.D. Bellevue Hospital Medical College, New York City, 1864, died from Bright's disease at his home in Penn Yan, N. Y., May 15, aged 69.

Malcolm White, M.D. Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa, 1901, died suddenly at a hotel in Ashburn, Mo., May 17.

Jonathan J. Wright, M.D. Cincinnati College of Medicine and Surgery, 1854, died at his home in Emporia, Kans., May 13, from heart disease, aged 74.

Henry N. Stanley, M.D. University of Louisville, 1881, died at his home in Atlanta from heart disease, after ten years of ill health, May 23, aged 44.

Charles Hugh Murray, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasgow, 1889, formerly of Port Rush, Ireland, died at Mentone, Cal., March 9, aged 40.

Herbert C. Williams, M.D. College of Physicians and Surgeons, Baltimore, 1882, died at his home in Sanford, N. C., May 16, after a long illness.

Margaret Preston Duckman, M.D. Woman's Medical College, Philadelphia, died at her home in Trenton, N. J., January 7, from scarlet fever.

John F. James, M.D. Western University Medical Department, London, Ont., 1895, died at his home in Ionia, Mich., May 15, aged 38.

Robert La Grange, M.D. Rush Medical College, Chicago, 1871, died at his home in Marion, Iowa, May 23, after an illness of about one year.

Michael Enright, M.D. Rush Medical College, Chicago, 1881, died suddenly from heart disease at his home in Akron, Colo., April 8.

Thomas Barnett, M.D. Rush Medical College, Chicago, died at his home in Fort Scott, Kan., May 19, from heart disease, aged 72.

John E. Maucher, M.D. University of Munich, Germany, 1851, died at his home in Carrolltown, Pa., May 21, from old age, aged 78.

Truman D. Nichols, M.D. New York, 1852, committed suicide by taking hydrate of chloral, May 14, at his home in Ripley, Okla.

Charles R. Jones, M.D. Ohio, 1876, died at his home in Jonesboro, Ind., May 19, from paralysis, after an illness of two years.

M. Taylor Powell M.D. College of Physicians and Surgeons, Baltimore, 1883, died at his home in Newburg, W. Va., May 15.

John B. Pettingill, M.D. University of Pennsylvania, Philadelphia, 1870, died at his home in Chicago, March 22, aged 59.

Charles Mudge, M.D. College of Physicians and Surgeons, New York City, 1888, died recently at his home in Phelps, N. Y.

Henry Huntington, M.D. Albany (N. Y.) Medical College, 1866, died at his home in National City, Cal., April 27, aged 85.

Alvin M. Woodward, M.D. New York, 1862, died at his home in New York City from intestinal disease, May 21, aged 68.

Frank G. Fuller, M.D., died at the home of his son in Mountville, S. C., May 22, after an illness of ten days, aged 82.

Fred Welch, M.D. Dartmouth Medical College, Hanover, N. H., 1893, died at his home in Olatha, Colo., Nov. 16, 1903.

John Ellwood Peters, M.D. Pennsylvania, 1875, died from apoplexy at his home in Jenkintown, Pa., May 16, aged 49.

Silas Griffith, M.D. Pennsylvania, 1866, of Philadelphia, died at Glen Moore, Pa., May 21, from apoplexy, aged 75.

J. P. Gilbreath, M.D., who had practiced for more than 50 years in Fallsburg, Ohio, died, May 16, aged 84.

Cornelius Van Evra, M.D., died suddenly at his home in Vineland, N. J., from apoplexy, aged 72.

Philo L. Hatch, M.D. Ohio, 1857, died at his home in Santa Barbara, Cal., May 21, aged 81.

Charles J. Cooper M.D. Ohio, 1902, died recently at his home in Penfield, Ill.

Association News.

THE ATLANTIC CITY SESSION.

The Deposit of Railroad Tickets—Instructions for Registration.

On arrival in Atlantic City or soon thereafter, members and any others who travel on the excursion tickets should leave their tickets with Mr. H. C. Blye, joint agent, at Morris Guards' Armory, 12 South New York Avenue, Atlantic City. On the day of departure, and not before, the ticket is to be claimed, and will then be signed by the joint agent. Tickets not thus deposited and signed will not be good for return passage.

On reaching Philadelphia, if stopover is desired, the ticket must be deposited in Philadelphia and taken up again on the day of departure. In any case, the holder must start on the homeward journey from Philadelphia June 13. There is a possibility that arrangements may be made for extension of time, but this is not probable enough to be depended on.

The latest information as to stopovers is that stopover will be allowed on the going trip as first announced.

Registration at Atlantic City—Some Suggestions.

The Registration Bureau will be open for the registration of members at 8 o'clock Monday morning, June 6, and will remain open until 5:30 p. m. These hours will prevail each day until Friday, June 10, when the hours will be from 9 to 11 a. m., the bureau closing at 11.

Members will do well to go to their hotels immediately on arriving, and, having located, to the bureau and register.

The method of registration is as follows: Members will find cards at the bureau, which they will fill out. These cards are double; the upper relates particularly to registration and the attached card is intended for two purposes—the first to indicate the section with which the member desires to affiliate himself, and the second will be the basis for the list that will be published in THE JOURNAL after the session. When these cards are filled out, the member will present them at the indicated window, and if he has paid his dues for 1904, he will show his "pocket card." If he has not paid his dues for 1904, he will present the registration cards at a cash window and there pay the amount due.

Members are urged to take with them their pocket cards. It will save them, as well as the clerks at the Registration Bureau, much annoying delay.

NEW MEMBERS.

Physicians who desire to join the Association at Atlantic City must bring with them a certificate showing they are members of their state association or of one of its component branches. This is important. The certificate should be signed by the president and secretary of the state association or by the president and secretary of a component society.

House of Delegates.

The House of Delegates will be called to order promptly at 10 a. m., Monday, June 6, at the High School Building. The Committee on Credentials and Registration will be at the High School Building at 9 a. m. for the registration of the members of the House of Delegates. Members are urged to be present at 9 o'clock, or as soon after as possible, so that the registration may be completed by the time the meeting is called to order.

Rush Monument Dedication.

The announcement last week that the dedication of the Rush monument would be at 4 p. m., Saturday, June 11, was an error. The hour fixed is 5 p. m.

SCIENTIFIC EXHIBIT.

Program of Demonstrations To Be Given at the Atlantic City Session.

Dr. Frank B. Wynn, Indianapolis, director, announces the following program of demonstrations to be given on Wednesday and Thursday afternoons on Young's Pier.

WEDNESDAY, JUNE 8—2 P. M.

1. Some Phases of Surgical Pathology. Charles H. Frazier, Philadelphia.
2. Arteriosclerosis and Consecutive Visceral Lesions. William H. Welch, Baltimore.
3. Series of Heart Lesions. J. E. Greiwe, Cincinnati.
4. Lesions of Tuberculosis, Human and Animal. W. M. Late Coplin, Alfred Stengel and C. Y. White, Philadelphia.
5. Yellow Fever Exhibit, Illustrating Methods of Transmission, Geographical Distribution and Means of Extermination. M. J. Rosenau, Washington, D. C.
6. Series of Brain Lesions. D. J. McCarthy, Philadelphia.
7. Art Work in Pathologic Anatomy. I. W. Blackburn, Washington, D. C.
8. Miscellaneous Demonstrations.

THURSDAY, JUNE 9—2 P. M.

9. Hodgkin's Disease. Warfield T. Longcope, Philadelphia.
10. Lesions in Diseases of the Kidney. W. M. Late Coplin, Philadelphia.
11. Demonstration by Photomicrographs of Malaria, Aleppo Boil, Scarlatina, Vaccinia and Variola. W. T. Councilman, Boston.
12. Selected Photomicrographs Illustrating Various Pathologic Conditions (Typhoid, Cirrhosis of Liver, Tuberculosis, Diphtheria and Neuralgia). Henry A. Christian, Boston.
13. Demonstration of Some Lesions of Non-tuberculous Chronic Arthritis. Edward H. Nichols, Boston.

Demonstrations 11, 12 and 13 will be chiefly by means of lantern slides. At the close of the afternoon session the enlargements of photomicrographs from the Department of Pathology of the Harvard Medical School will be informally demonstrated by Dr. Councilman, Nichols and Christian.

14. Forms of Food Adulteration, Especially of Imported Food Products. H. W. Wiley, Washington.

PHYSIOLOGIC EXHIBITS.

15. (a) New Optical Apparatus. Winfield S. Hall, Chicago.
16. (b) Harvard Physiologic Apparatus. W. B. Cannon, Boston.
17. (c) Models of Central Nervous System. Gaylord P. Clark, Syracuse, N. Y.
18. (d) Specimens of Suprarenal Grafting. F. C. Busch, Buffalo.

Miscellaneous demonstrations.

The Public Service.

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending May 28, 1904:

Henderson, Albert R., asst.-surgeon, ordered to report about June 15, 1904, to Colonel Wm. M. Wallace, Fifteenth Cavalry, president of the Army Retiring Board at the War Department in Washington, for examination by the board.

Davis, William R., Owen, Learns J., Zinke, Stanley G., Culler, Robert M., Weed, Frank W., and Wickline, Wm. A., first lieutenants and asst.-surgeons, appointed to rank as such from May 19, 1904.

Williamson, L. P., asst. surgeon, in addition to present duties pertaining to the Louisiana Purchase Exposition, St. Louis, is announced as attending surgeon at the Northern Division Headquarters in that city.

Stiles, Henry R., asst.-surgeon, reported for treatment at U. S. Army General Hospital, Presidio of San Francisco.

Woodbury, Frank T., asst.-surgeon, granted twenty days' leave of absence.

Truby, W. F., asst.-surgeon, granted thirty days' leave of absence.

Edie, Guy L., surgeon, reported for and assigned to duty in S. G. O. in charge of the sanitary and disbursing division and as disbursing officer, medical department, assignment to the Philippine Islands being revoked.

Steer, Sam'l L., asst.-surgeon, granted eighteen days' leave of absence about June 1, 1904.

Buck, Carroll D., assist.-surgeon, ordered in addition to present duties at the Louisiana Purchase Exposition, St. Louis, to attend the sick of the 119th Company, Coast Artillery.

Wilson, Compton, asst.-surgeon, granted thirty days' leave of absence.

Vose, William E., granted two months and twenty-three days' leave of absence.

Woodruff, Chas. E., surgeon, reports arrival at San Francisco for treatment at U. S. Army General Hospital, Presidio of San Francisco; left Manila, P. I., April 6, 1904.

Jones, George B., contract surgeon, arrived at San Francisco, from the Philippines May 16 in the transport *Sherman*, and directed to accompany five companies of the Twenty-ninth Infantry to Fort Douglas, Utah, and then to proceed to his home at Rushville, Ind.

Purnell, Julius M., contract surgeon, arrived at San Francisco from the Philippines May 16 on the transport *Sherman* and directed to accompany the First Battalion, Twenty-Ninth Infantry, to Fort Bliss, Texas, and then to avail himself of three-months' leave of absence.

Stuckey, Harrison W., contract surgeon, arrived at San Francisco from the Philippines May 16, on the transport *Sherman*, and directed to accompany Companies K and M, Twenty-ninth Infantry, to Fort DuChesne, Utah, and then to proceed to his home at Columbus, Ohio.

Reddy, Joseph W., contract surgeon, arrived at San Francisco from the Philippines May 16, on the transport *Sherman*, and directed to accompany Company I, Twenty-ninth Infantry, to Whipple Barracks, Ariz., and then to begin two months' leave of absence.

White, J. Samuel, contract surgeon, returned to duty at Fort Snelling, Minn., May 20, from leave of absence, and on the 23d left his post for temporary duty at Fort Keogh, Mont.

Stearns, Charles H., contract surgeon, granted leave of absence for fifteen days, to take effect June 15.

Ayer, Jr., contract surgeon, granted two months' leave of absence from the Philippine Division, to take effect on his arrival in the United States.

Smith, Rodney D., contract surgeon, left Fort Stevens, Ore., May 19, for temporary duty at Skagway, Alaska.

Truax, Jesse P., contract surgeon, ordered from Skagway, Alaska, to Vancouver Barracks, Wash., for medical treatment.

Thornton, James W., contract surgeon, granted leave of absence for three months from the Philippine Division, to take effect on his arrival in the United States.

Kuhn, Charles F., contract surgeon, arrived at New York May 22 from the Philippine Division on the transport *Kilpatrick*. He will remain on duty on that transport until June 1, and then avail himself of leave of absence for two months.

Parkman, Wallace E., contract surgeon, relieved at Fort Worden, Wash., May 20, and proceeded to his new station, Fort Assiniboine, Mont.

Hepburn, James H., contract surgeon, returned to his station, Fort Douglas, Utah, May 20 from two months' duty in the field.

Decker, George M., contract dental surgeon, left his station, Fort Logan, Colo., for temporary duty at Fort DuChesne, Utah, May 16.

Ames, Roger P., contract surgeon, returned to duty May 25 at Fort McIntosh from leave of absence.

Navy Changes.

Changes in the medical corps of the Navy, week ending May 28:

Thompson, E., surgeon, commissioned surgeon with the rank of lieutenant commander from March 3, 1903.

Langborne, C. D., P. A. surgeon, detached from the *Monongahela* and ordered to the *Denver*.

Brown, H. L., asst.-surgeon, detached from the *Lancaster* and ordered to the Naval Station, Guantanamo, Cuba, with additional duty on the *Monongahela*.

Iden, J. H., asst.-surgeon, ordered to the Naval Hospital, Philadelphia.

Flint, J., asst.-surgeon, ordered to the Naval Hospital, Chelsea, Mass.

May, H. A., asst.-surgeon, ordered to the *Franklin*.

Eagling, E., pharmacist, retired, detached from the Naval Hospital, Yokohama, Japan, and granted leave abroad.

Hibbett, C. T., surgeon, detached from the *Franklin* June 1 and ordered to duty in charge of the Naval Hospital, Cavite, P. I., sailing from San Francisco June 11.

Wentworth, A. R., surgeon, ordered to the *Franklin* June 1.

Lovering, P. A., surgeon, detached from duty in charge of the Naval Hospital, Cavite, P. I., and ordered home to wait orders.

Furlong, E. M., P. A. surgeon, and McDonnold, P. E., asst.-surgeon, ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C., for temporary duty.

Belknap, J. L., asst.-surgeon, ordered to the Naval Hospital, New York.

Wheeler, L. H., asst.-surgeon, ordered to the Naval Hospital, Chelsea, Mass.

Eagling, E., pharmacist, having been examined by a retiring board and found incapacitated for active service, on account of disability incident thereto, is retired from active service, May 19, 1904, under the provisions of Section 1453, Revised Statutes.

Marine-Hospital Service.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended May 26, 1904:

Carter, H. R., surgeon, two days' leave of absence from May 26, 1904, under Paragraph 189 of the Regulations.

Nydegger, J. A., P. A. surgeon, granted leave of absence for fifteen days from May 6, 1904, on account of sickness.

Clark, Taliaferro, P. A. surgeon, to proceed to Duluth, Minn., for special temporary duty.

Anderson, J. F., P. A. surgeon, to proceed to Hartford, Conn., for special temporary duty.

Duffy, Francis, A. A. surgeon, granted leave of absence for two days from May 25.

Hough, J. S., asst.-surgeon, granted leave of absence for thirty days.

Hunter, W. R., A. A. surgeon, granted leave of absence for seven days from May 22.

Wetmore, W. C., A. A. surgeon, granted leave of absence for seven days from May 17, 1904, under Paragraph 191 of the Regulations.

Hall, L. P., pharmacist, to report to chairman of examining board at Norfolk, Va., May 31, 1904, for examination to determine his fitness for promotion to the grade of pharmacist of the second class.

BOARDS CONVENED.

Board convened at Washington, D. C., May 26, 1904, for the physical examination of candidates for admission into the Revenue-Cutter Service. Detail for the board: Asst.-Surgeon-General L. L. Williams, chairman; Asst.-Surgeon-General W. J. Pettus, recorder.

Board convened at Norfolk, Va., May 31, 1904, for the examination of Pharmacist L. P. Hall to determine his fitness for promotion to the grade of pharmacist of the second class. Detail for the board: Surgeon J. B. Stoner, chairman; Asst.-Surgeon J. S. Boggess, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the period from May 21 to May 27, 1904:

SMALLPOX—UNITED STATES.

California: San Francisco, May 8-15, 1 case.
District of Columbia: Washington, May 15-21, 6 cases.
Florida: Jacksonville, May 15-21, 1 case.
Georgia: Macon, May 15-21, 4 cases.
Illinois: Danville, May 15-21, 2 cases.
Kentucky: Covington, May 15-21, 1 case.
Louisiana: New Orleans, May 15-21, 12 cases, 1 imported.
Michigan: Detroit, May 15-21, 1 case.
Missouri: St. Louis, May 15-21, 11 cases.
Nebraska: Omaha, May 15-21, 2 cases, 1 death.
New Hampshire: Manchester, May 15-21, 4 cases.
Ohio: Toledo, May 15-21, 1 case.
Pennsylvania: Pittsburg, May 18-24, 3 cases.
South Carolina: Charleston, May 16-21, 3 cases.
Wisconsin: Milwaukee, May 15-21, 8 cases.

SMALLPOX—FOREIGN.

Brazil: Rio de Janeiro, April 11-24, 133 cases, 63 deaths.
Canada: Sydney, May 15-21, 1 case.
China: Hongkong, March 26-April 2, 6 cases, 5 deaths, Shanghai, March 25-April 2, 8 deaths.
France: Marseilles, April 1-30, 5 deaths.
Great Britain: Liverpool, May 8-14, Birmingham, 1 case; Bristol, 1 case; Leeds, 3 cases; Liverpool, 1 case; May 1-7, Edinburgh, 5 cases; Hull, 1 case; Glasgow, May 7-13, 25 cases, 1 death; London, May 1-14, 40 cases, 1 death; New Castle-on-Tyne, May 1-17, 3 cases, 1 death; Nottingham, April 24-May 7, 8 cases.
India: Bombay, April 20-26, 23 deaths; Karachi, April 18-24, 9 cases, 1 death.
Italy: Catania, May 6-12, 1 death; Palermo, May 1-7, 2 cases.
Japan: April 1-9, Moji, present; Nagasaki, epidemic; Sasebo, present.
Java: Batavia, April 10-16, 11 cases, 1 death.
Mexico: May 8-14, Tampico, 1 death; Torreon, 5 cases, 5 deaths.
Netherlands: Rotterdam, May 8-14, 1 death.
Russia: Moscow, April 24-30, 7 cases, 4 deaths; Odessa, April 11-24, 5 cases, 1 death; St. Petersburg, April 24-May 7, 32 cases, 8 deaths; Warsaw April 10-23, 53 deaths.
Straits Settlements: Singapore, March 26-April 2, 1 death.
Turkey: Alexandretta, May 1-7, epidemic; Beirut, April 24-30, present; Constantinople, May 2-8, 6 deaths.

SMALLPOX—INSULAR.

Philippine Islands: Cebu, March 1-31, 1 case, 1 death; Manila, March 27-April 2, 1 case.

YELLOW FEVER.

Brazil: Rio de Janeiro, April 11-24, 7 deaths.
Ecuador: Guayaquil, April 24-May 4, 5 deaths.
Mexico: Coatzacoalcos, May 11-17, 3 cases, 1 death; Merida, April 24-30, present; Vera Cruz, May 8-21, 3 cases.

CHOLERA.

India: Bombay, April 20-26, 1 death; Madras, April 16-22, 1 death.
Persia: Kermanschah, to April 11, 20 deaths.

PLAGUE—FOREIGN.

Africa: Johannesburg, May 5, 2 cases; Port Elizabeth, April 17-23, 2 cases, 1 death.
Australia: Brisbane, April 8-16, 2 cases.
Brazil: Niehtheroy, April 15, 1 case, 1 death; Para, April 24, still present; Rio de Janeiro, April 11-24, 5 deaths.
Chile: Antofogasta, April 19, 9 cases.
China: Hongkong, March 26-April 2, 2 deaths.
Formosa: March 31-April 9, 229 cases, 167 deaths.
India: Bombay, April 20-26, 532 deaths; Madras, April 16-22, 1 death.
Peru: Lima, April 10-11, 20 cases.
Straits Settlements: Singapore, March 27-April 2, 1 death.

PLAGUE—INSULAR.

Philippine Islands: Cebu, March 1-31, 3 cases, 3 deaths; Manila, March 25-April 2, 1 case.

Society Proceedings.

COMING MEETINGS.

American Medical Association, Atlantic City, N. J., June 7-10.

Indian Territory Medical Association, Holdenville, June 3-5.
American Academy of Medicine, Atlantic City, June 4-6.
Medical Society of New Jersey, Atlantic City, June 4-7.
Nat. Conf. State Med. Exam. and Lic. Bds., Atlantic City, June 6.
American Medical Editors' Association, Atlantic City, June 6.
American Assn. Life Ins. Exam. Surgs., Atlantic City, June 6.
American Gastro-Enterological Association, Atlantic City, June 6.
Association of American Medical Colleges, Atlantic City, June 6.
Nat. Assn. of U. S. Pen. Exam. Surgs., Atlantic City, June 6-7.
Massachusetts Medical Society, Boston, June 7-8.

American Orthopedic Association, Atlantic City, June 8-10.
American Urological Association, Atlantic City, June 10-11.
Medical Society of Delaware, Lewes, June 14.
Wisconsin State Medical Society, Milwaukee, June 22.

AMERICAN CONFEDERATION OF RECIPROCATING EXAMINING AND LICENSING MEDICAL BOARDS.

Third Annual Meeting, held in Chicago, May 24, 1904.

The President, Dr. W. A. Spurgeon, Muncie, Ind., in the Chair.

DR. GEORGE H. SIMMONS, Chicago, delivered the address of welcome on behalf of the local profession. The response was delivered by Dr. Chester Mayer, member of the Kentucky State Board of Health.

The following states are members of this confederation: Wisconsin, Indiana, Michigan, Ohio, Iowa, Georgia, Kansas, Illinois, Nebraska, Kentucky, Maryland, New Jersey and Pennsylvania (Eclectic).

There were present at the meeting:

MICHIGAN: J. H. Cowell, Saginaw, president; B. D. Harison, Sault Ste. Marie, secretary; Wm. Bell, Belding; H. B. Landon, Bay City; Geo. Ranney, Lansing.
INDIANA: W. A. Spurgeon, Muncie, vice-president; W. J. Gott, Crawfordsville, secretary; L. C. Webster.
WISCONSIN: J. R. Currans, Two Rivers, president.
IOWA: J. A. McElveen, Charlton, president.
KENTUCKY: Chester Mayer, Louisville.
MARYLAND: J. McP. Scott, Hagerstown.
ILLINOIS: Geo. W. Webster, Chicago, president.
NEBRASKA: Benj. F. Bailey, Lincoln, president.

President's Address.

DR. SPURGEON recommended that every state medical practice act should empower the state board to enter into reciprocal relations with other states. He said that to get reciprocity, no state should stand aloof on account of inability to participate fully in all the advantages to be obtained from reciprocity; a state should reciprocate in such cases as are eligible. To adjust differences, there should be appointed a board of arbitration, whose duty it would be to hear and decide disputed questions. To the end that reciprocity may become more general, a committee should be appointed to determine the best course for securing reciprocity clauses in the laws of such states as have no such provisions. He suggested further, that the confederation give full consideration to and reach some conclusion in the matter of the plan adopted by some medical colleges and universities of granting a combined baccalaureate and medical degree in six years. All the literary colleges in the country may consistently demand the same privilege, which would result in the establishment of many new medical colleges all over the states.

The discussion on the recommendations contained in the address was very full, and, in the main, hinged on the necessity of bringing about conditions that would permit of full reciprocity between the various states in the matter of medical registration and licensing. To this end it was considered necessary that there should be uniform entrance requirements in all the medical colleges, uniform standard curricula, uniformity in the nature and conduction of state board examinations for licensure, with such additions as each board may see fit to make.

The basis for reciprocal registration under which the confederation is now working is the following:

(a) As a prerequisite to reciprocal registration, the applicant shall file in the office of the board of the state of which he is a licenciate such evidence as will enable the said board to certify that he is of good moral and professional character. Such certificate shall be filed with his application for reciprocal registration in another state.

(b) (Qualification 1). A certificate of registration showing that an examination has been made by the proper board of any state, on which an average grade of not less than 75 per cent. was awarded, the holder thereof having been at the time of said examination the legal possessor of a diploma from a medical college in good standing in the state where reciprocal registration is sought, may be accepted in lieu of examination, as evidence of qualification. Provided that in case the scope of the said examination was less than that prescribed by the state in which registration is sought, the applicant may be required to submit to a supplemental examination by the board thereof in such subjects as have not been covered.

(c) (Qualification 2). A certificate of registration or license issued by the proper board of any state may be accepted as evidence of qualification for reciprocal registration in any other state. Provided that the holder of such certificate had been engaged in the reputable practice of medicine in such state at least one year; and also provided that the holder thereof was, at the time of such registration, the legal possessor of a diploma issued by a medical college in good standing in the state in which reciprocal registration is sought, and that the date of such diploma was prior to the legal requirement of the examination test in such state.

The following committees were appointed to report at the next meeting:

Committee on uniformity as to the scope and character of examinations to be held by state boards of health and examining boards: Chester Mayer, Kentucky; L. C. Webster, Indiana, and Geo. W. Webster, Illinois.

Committee on uniform requirements, both entrance and graduation, to be demanded of medical colleges: B. F. Bailey, Nebraska; B. D. Harison, Michigan, and J. McP. Scott, Maryland.

Committee on advanced standing: J. F. McElveen, Iowa; J. R. Currans, Wisconsin, and H. R. Landon, Michigan.

Committee on uniformity of application blanks and forms: The secretaries of examining boards and the secretary of this confederation.

Conference committee to meet with similar committees from the American Medical Association, Association of American Medical Colleges, Southern Medical College Association, National Confederation of State Licensing and Examining Boards, American Institute of Homeopathy, National Eclectic Medical Association and National Physio-Medical Association of Physicians and Surgeons.—Geo. W. Webster, Illinois.

The next meeting of the confederation is to be held in St. Louis, Mo., Oct. 25, 1904. The present officers are to hold over until then.

ASSOCIATION OF AMERICAN PHYSICIANS.

Nineteenth Annual Meeting, held at Washington, D. C., May 10-11, 1904.

(Concluded from page 1443.)

The Relation of Cells with Eosinophile Granulations to Bacterial Infection.

DR. E. L. OPIE, Baltimore, read this paper. In the course of the bacterial infections the eosinophile cells are predominant in the local reaction, but disappear from the peripheral circulation. In the non-bacterial infections, such as smallpox and scarlet fever, on the other hand, the eosinophile cells are increased. The experiments through which these conclusions were reached were performed on guinea-pigs, using the *Bacillus pyocyaneus* and the *Bacillus mucosus capsulatus*, among others. In the acute infections the eosinophile cells disappear from the peripheral circulation rapidly, within twenty-four hours in the case of infection with *Bacillus pyocyaneus*. These cells gradually returned to the circulation, and, on the fifth or sixth day after the infection, reached their maximum number; by the eighth day they had fallen to their normal percentage. This process suggests a destruction of the eosinophiles, followed by their regeneration. After the eosinophile cells have passed from the blood vessels into the surrounding tissues they were found to undergo a nuclear degeneration and then to become ingested by the large mononuclear leucocytes, the macrophages of Metchnikoff. Eosinophilous myelocytes were found in the venous sinuses of the spleen after infection with the microorganisms referred to. Later they became less numerous, and within twenty-four hours had entirely disappeared. This fact was interpreted to mean that these cells originate in the bone marrow, and are temporarily held in the spleen. The opinion is advanced that the bacteria employed in this study are positively chemotactic for the eosinophile cells, attracting them from the bone marrow to the site of the inoculation. The eosinophile cells accumulate near the bacteria, and play some part in the series of changes following the invasion.

DISCUSSION.

DR. S. J. MELTZER, New York City, said that there is a distinct contrast between the action of animal parasites and that of bacteria on these cells. He believes that the toxins of both classes of parasites are chemotactic for both kinds of leucocytes, but that in the case of the animal parasites the eosinophile cells predominate, while in the case of the bacteria the neutrophile cells predominate. This may be a way to determine which diseases are due to animal parasites and which are due to bacteria.

A New Case of Chloroma with Leukemia, with a Study of the Cases Reported since 1893.

DRS. GEORGE DOCK and ALFRED S. WARTHIN, Ann Arbor, Mich., read this paper. Clinically, chloroma is characterized by the development of an anemia without apparent cause,

emaciation, loss of strength, exophthalmos, strabismus, hemorrhages and the occurrence of tumors. The case reported occurred in a man, aged 45 years, who began to get weak and to have a rapid pulse. He was thought to have pernicious anemia; there was neither lymphatic nor splenic enlargement. There was a leucocytosis of 35,000; the blood had the appearance of lymphatic leukemia; and greenish tumors developed in various parts of the body. A differential count of the leucocytes showed the presence of 6 per cent. lymphocytes, 3 to 4 per cent. large lymphocytes, 1 per cent. eosinophiles, 0.1 to 0.2 per cent. mononuclear eosinophiles, 0.1 to 1.9 myelocytes, 0.4 per cent. basophiles, and 80 per cent. of cells different from those seen in normal blood, but like the normal bone marrow cells. Normoblasts and megaloblasts were found. The original diagnosis made was acute lymphatic leukemia of gastro-intestinal origin, but later this was revised to chloroma. The disease appears to be more common in men than in women; the average age of the patients is 18.8 years; the average duration six months. In 13 cases the blood presented the appearance of that of acute lymphatic leukemia, except in one case in which the leucocytes numbered only 8,000. The relation of chloroma to leukemia is decided, but the complete resemblance is not always found. The cause of the color of the tumors is not known. In one of the reported cases the sediment of leucocytes was green in color, and the clots found in the heart after death were green in color. The growths have the structure of leukemic growths in general, and they sometimes contain large numbers of eosinophilic cells. The tumors arise primarily from the bone marrow, the neoplastic hyperplasia having its starting point in the parent cells of the large lymphocytes. These cells being undifferentiated, easily break down and explain some of the histologic blood findings. It is suggested that the condition is a malignant form of leukemia, due to deficient blood formation and not to excessive hemolysis.

DISCUSSION.

DR. WILLIAM OSLER, Baltimore, said that the clinical picture of chloroma is so different from that of acute leukemia that a sharper differentiation should be made between the two diseases.

DR. S. J. MELTZER, New York City, asked if albumose had been found in the urine in the case reported. He also asked whether the tumors were always found in connection with the bones of the axial skeleton.

DR. GEORGE DOCK said that albumose was not looked for in the urine of his patient; it has sometimes not been found in those cases in which it has been looked for. In cases examined thoroughly some of the bones of the appendicular skeleton have been the seat of tumor formation. The distribution is irregular, however. The term myeloma is unsatisfactory.

(To be continued.)

AMERICAN GYNECOLOGICAL SOCIETY.

Twenty-ninth Annual Meeting, held in Boston, May 24-26, 1904.

The society met in the Boston Medical Library under the presidency of Dr. Edward Reynolds, Boston.

An address of welcome was delivered by Dr. Charles M. Green, Boston, which was responded to by Dr. Henry T. Byford, Chicago.

Officers Elected.

The following officers were elected: President, Dr. E. C. Dudley, Chicago; vice-presidents, Drs. Henry D. Fry, Washington, D. C., and Henry C. Coe, New York City; secretary, Dr. J. Riddle Goffe, New York City; treasurer, Dr. J. M. Baldy, Philadelphia.

Niagara Falls, N. Y., was selected as the place for holding the next annual meeting.

The Treatment of Gallstones Found as a Coincidence in Abdominal or Pelvic Operations.

DR. JOHN G. CLARK, Philadelphia, called this an unsettled question. He removes such gallstones if the patient's condition permits. In his cases no death has occurred, nor had there been any serious complication referable to the secondary operation. He gave the history of 12 cases.

DISCUSSION.

DR. R. STANSBURY SUTTON, Pittsburg, agreed that gallstones encountered during another operation should be removed, if the patient's condition warranted it. He said that kolalin obviated the necessity of operation in many cases. He had used it in dozens of cases in which he had held operation in abeyance, and did not have to operate subsequently.

DR. GEORGE M. EDEBOHLS, New York City, narrated a case in which he found a gallstone four centimeters long, while operating for movable kidney and appendicitis. The attending physician would not let him remove the stone. A year later operation for some other condition showed that the stone either had passed or had been dissolved. Treatment had been olive oil for about a month; whether this had anything to do with the passage of the stone he did not know.

DRS. BROOKS H. WELLS, New York City, and Seth C. Gordon, Portland, Maine, use practically the same measures as Dr. Clark. Dr. Wells said that in a number of patients complaining of obscure symptoms of so-called functional indigestion, cleaning out the gall bladder and draining it gave remarkable relief.

DR. HIRAM N. VINEBERG, New York City, said that he had formerly done as had the essayist, but after hearing Dr. Mayo's views he had changed his method. Simply opening the gall bladder and removing the stones did not effect a cure, as was proved by three or four cases that occurred in his own practice. If the gall bladder was diseased, however, it should be removed.

DR. J. M. BALDY, Philadelphia, said that gallstones existed for years without causing any material discomfort, but that when infection occurred trouble was liable to ensue.

DR. WALTER P. MANTON, Detroit, quoted Ochsner as saying that he had tried almost everything in so-called cases of chronic dyspepsia without affording relief; yet after removing gallstones which were found, the patients were cured. Dr. Manton had seen a number of such cases, and contended for the removal of gallstones or the gall bladder if diseased. He did not believe that anything could be taken to dissolve gallstones.

DR. BEVERLY MACMONAGLE, San Francisco, agreed that during operation for other cause, the operator should investigate the gall bladder. If the surgeon could do something of a prophylactic nature, without adding to risk of life, it was a wise thing to do.

Ovarian Pregnancy.

DR. J. CLARENCE WEBSTER, Chicago, reported a case. There was a right ovarian irregularly rounded swelling, measuring 7 by 8 centimeters. There was no evidence of rupture into the peritoneal cavity. The adhesions were recent. Sections of the ovarian swelling consisted mainly of extravasated blood and disseminated fragments of the chorion. No evidence of transformation of ovarian connective tissue into decidual was noted. It was certain that the pregnancy did not start in a graafian follicle.

DISCUSSION.

DR. J. WHITRIDGE WILLIAMS, Baltimore, said ovarian pregnancy was the rarest of all forms of extrauterine pregnancy. While there was no doubt that muellerian tissue might be found in the ovary, as mentioned by the essayist, and confirmed by numerous observers, it was going too far to advance that view in explanation of every case of ovarian pregnancy.

DR. JOHN T. THOMPSON, Portland, Me., and DR. EDWARD P. DAVIS, Philadelphia, reported cases. In the latter's case the indications were that the pregnancy did not originate in the graafian follicle.

DR. LAPTHORN SMITH, Montreal, had diagnosed ectopic pregnancy by the clinical symptoms, had operated, and found hematoma of the ovary. He had said to students that his diagnosis was wrong, because authorities maintained that there was no such thing as ovarian pregnancy, but after hearing what had been said he was convinced there was.

(To be continued.)

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-fourth Annual Meeting, held at Bloomington, May 17-19, 1904.

(Concluded from page 1440.)

X-Ray Therapy.

DR. CHAS. D. CENTER, Quincy, gave a review of the cases reported to the society one year ago, with some additional notes used as illustrations. He pointed out the difficulty of telling before treatment whether benefit will follow the application of the *x*-rays or not. He reiterated that more is claimed for the rays therapeutically than is justified, saying that this claim arises from some apparently brilliant results which are not supported clinically by the lapse of time.

Anal Fissure.

DR. J. RAWSON PENNINGTON, Chicago, discussed the office treatment of fissure in ano. After referring to the etiologic factors, the more important symptoms and the diagnosis, he considered the non-operative and operative treatment, and mentioned divulsion of the external sphincter without the use of the ordinary general or local anesthetic.

Pregnancy and Appendicitis.

DR. CHAS. B. REED, Chicago, spoke of the reciprocal influence existing between the inflamed appendix and the fruit sac, and of the disastrous consequences for the gestation and the fetus. The mortality statistics of this condition were compared with those of other serious complications of pregnancy. The difficulties of diagnosis during pregnancy and the desirability of adopting a definite mode of procedure in these cases were emphasized.

Intestinal Obstruction.

DR. J. F. PERCY, Galesburg, reported a case. He insisted on early operation, and outlined the best methods of treatment before consent for operation is obtained. He pointed out the wisdom of temporizing operative methods in a case of intestinal obstruction where exhaustion is extreme.

Imperforate Hymen.

DR. CHARLES B. HORRELL, Galesburg, described a rather unique case of imperforate hymen in a fairly rugged, rather athletic girl of 16. She was a bicycle rider, and was healthy, one in whom naturally an imperforate hymen would not be suspected, but the patient suddenly exhibited an abdominal tumor the size of a six months' gravid uterus. Examination revealed imperforate hymen, and an incision released about two quarts of grumous black blood, with perfect relief. He said that although this condition is rare, it may occasionally be found.

Antenatal Pathology.

DR. CHARLES E. PADDOCK, Chicago, stated that there is a fetal pathology which has for its etiology certain factors which could have been prevented. Every case of pregnancy should be considered as an abnormal condition, requiring the advice and attention of a physician. A neglect to do this often means injury to the fetus. The fetus suffers from a hereditary taint, notwithstanding the possibility of such a condition being known by the physician and one or both parents.

Porro Operation.

DR. CARL WAGNER, Chicago, described a modification which consists in reversing the course of the operation. He described a method of controlling hemorrhage, pointed out the indications for the operation, and reported three cases, with recoveries.

Symphysiotomy in Persistent Mento-Posterior Face Presentation.

DR. E. B. MONTGOMERY, Quincy, reported a case. He had been unable to find much literature on the use of symphysiotomy in such cases, although all the text-books on obstetrics are favorable to its performance. In his own case, the mother lived, but the child perished from asphyxia shortly after birth.

Hernia.

DR. E. WYLLYS ANDREWS, Chicago, exhibited a model for illustrating herniotomy and suture work on the abdominal parietes. He emphasized the importance of suturing abdominal wounds layer by layer, and pointed out the difficulty of showing all steps of the closure to large audiences. Students get inadequate notions of the real care necessary. Herniotomy can hardly be shown to more than eight or ten observers. He spoke of the value of cloth in layers to imitate abdominal fascia. The parts are almost perfectly reproduced in large size. The author's radical cure for hernia was demonstrated.

Immediate Abdominal Section.

DR. DENSLOW LEWIS, Chicago, in a paper with this title, said that the opinion is concurred in that increased facilities for surgical work and the multiplicity of hospitals in country districts often induced practitioners to undertake important abdominal operations without proper qualification or adequate experience. It is conceded that the usual post-graduate instruction may be a means of advertisement for the instructor rather than an honest attempt to teach the student-practitioner the details of operative technic. It is also admitted that many of those in attendance for a few weeks at post-graduate schools only too often seek a superficial knowledge of recent advances, and a respite from their everyday work, and few are actuated by a sincere desire to add to their actual surgical capability. Nevertheless, it is urged that under certain conditions abdominal section must be undertaken by the practitioner in charge, for without such intervention the patient's life is jeopardized, and in some instances the result is inevitably fatal. The principles of asepsis are simple and easily applied anywhere. The author cited cases from his recent experience in ectopic gestation, appendicitis, obstruction of the bowels, and other conditions where the demonstration has been made that immediate operation alone can save life.

Drainage.

DR. J. N. STEALY, Freeport, discussed the use and abuse of drainage. The purposes of drainage were set forth, also the indications and advantages, as against the disadvantages and bad results of drainage. The author believes that in the present day the inclination is for less drainage.

Other Papers Presented.

In the section on practice of medicine, there was a very valuable symposium presented by Chicago physicians on tuberculosis.

DR. GEORGE W. WEBSTER spoke of the mortality of the disease in Illinois for the years 1902 and 1903.

DR. CHARLES I. MIX pointed out the factors causing tuberculosis and aiding its spread. He offered suggestions for its prevention.

DR. FRANK BILLINGS discussed the diagnosis of pulmonary tuberculosis; Dr. Robert B. Preble the treatment. Dr. Homer M. Thomas pointed out the annual economic loss to the state of Illinois from this disease. Dr. Harold N. Moyer discussed the duty of the state in restricting tuberculosis.

In the section on surgery there were symposia on eclampsia and carcinoma.

DR. PALMER FINDLEY, Chicago, spoke of the value of systematic blood examinations in gynecology.

DR. ALBERT GOLDSPOHN, Chicago, pointed out the reasons why digital exploration through the internal inguinal rings should be made in conjunction with every Alexander operation.

DR. GEO. W. NEWTON, Chicago, spoke on cystic tumors of the ovary, and emphasized, by the citation of illustrative cases, the importance of early and correct diagnoses. He likewise spoke of the accidents to and changes in ovarian cysts.

DR. HENRY F. LEWIS, Chicago, discussed some practical points in the diagnosis and treatment of placenta previa.

DR. S. C. STEMMEL, McComb, read a paper in which he made a plea for early and interval operations in cases of appendicitis. He presented some interesting statistics.

DR. H. W. CHAPMAN, Whitehall, reported a case of mastoid operation which embraced some unusual features.

DR. R. R. CAMPBELL, Chicago, considered the differential diagnosis between pseudo-membranous angina of syphilis and angina of diphtheria. He pointed out the difficulties encountered, referred to the treatment, and the results.

DR. THOMAS H. BATH, Bloomington, read a paper in which he brought forward successive scientific data confirming the mosquito as the definite host of malarial fever.

DR. JAMES MOREAU BROWN, Chicago, presented a general consideration of speech disorders, laying particular stress on etiology and treatment, and then discussed the so-called stammering institutes. He gave reasons why cases of this character should be treated by the physician.

Therapeutics.

[Our readers are invited to send favorite prescriptions or outlines of treatment, such as have been tried and found useful, for publication in these columns. The writer's name must be attached, but it will be published or omitted as he may prefer. It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns without allusion to inquirer.]

Fissures of Nipples.

For the painful fissures or slits or clefts of the nipples the following combinations are of service:

℞.	Ichthyol	3ii	8
	Glycerini	3iii	12
	Lanolini	3v	20

M. Sig.: Apply freely after nursing, and remove before the next morning by thorough washing; or:

℞.	Glycerini	3v	20
	Vitelli ovi	3iv	15
	Balsami Peru	gr. xlv	3

M. Sig.: Apply externally; or:

℞.	Balsami Peru.		
	Sodii boratis, āā	gr. lxxv	5
	Vitelli ovi	gr. xv	1
	Olei amygdalæ exp. q. s. ad	ʒi	30

M. Sig.: For external application.

℞.	Tr. benzoini co.	gtt. xv	1
	Olei olivæ	3ii	8
	Lanolini	3vi	24

M. Sig.: To be applied locally.

Seborrhea.

In the treatment of seborrhea, Shoemaker, in the *Internat. Med. An.*, recommends that attention be given to the anemia, digestive and menstrual disturbances which may be present. Locally galvanism is advised and bathing of the face every night with water as hot as can be borne. The following ointment is recommended:

℞.	Acidi salicylici	gr. xx	1 30
	Olei eucalypti	m. v	30
	Chloralis	gr. x	65
	Ung. zinci		
	Ung. aq. rosæ, āā	ʒss	15

M. Ft. unguentum. Sig.: Apply locally after bathing the face in hot water, gradually increasing the salicylic acid to one dram (4.00) and the oil of eucalyptus to fifteen minims (1.00).

Dysphagia of the Acute Anginas.

Regin, in *Prog. Médical*, recommends the following combination to be insufflated into the throat for the relief of pain in acute angina:

℞.	Pulv. acidi borici		
	Pulv. lactose, āā	gr. xxx	2
	Orthoformi	gr. xv	1
	Pulv. talci	gr. xxx	2
	Cocainæ hydrochlor.	gr. ¾	05
	Pulv. menthol	gr. 1/3	02

M. Ft. pulvis. Sig.: A small amount to be used as an insufflation into the patient's throat through a tube during inspiration just before taking food.

Treatment of Thrush.

Dr. Merletti, in *Jour. de Med. de Paris*, recommends that successive applications of hydrogen dioxid and sodium borate be employed in the treatment of thrush. These two medicinal agents produce an abundance of froth which acts immediately on the organism present. This treatment should be repeated three or four times in twenty-four hours, and if begun early will destroy the fungus growth within the first twenty-four hours. It is of service even in the confluent type.

Olive Oil.

Harvey, in an abstract in *St. Louis Courier of Medicine*, considers pure olive oil Nature's best fat for dietetic purposes. It contains nitrogen and carbon, together with metabolic elements, oxygen and hydrogen in proper proportion to sustain life. Besides its value, which has been spoken of in the treatment of dysentery, the author recommends it in general ulceration and irritation of the stomach and bowels of alcoholics, in doses of half an ounce to an ounce (15.-30.) three or four times a day. In chronic constipation, in gallstones and jaundice, the author regards it as curative in many instances, as it seems to liquefy the cholesterin, preventing the formation of gallstones; it lubricates the bowel and promotes the flow of bile, thereby aiding digestion and regulating peristalsis. In nursing mothers whose milk is deficient in fats the pure oil emulsified and combined with the hypophosphites has been found to be of great advantage for both mother and child. He prefers this emulsion to all the fish emulsions, linseed or petroleum oils in the treatment of marasmus, rachitis, pulmonary or tubercular troubles and of benefit where a real food or tonic is indicated. It is also of value in the treatment of hyperacidity, chronic gastric catarrh and constipation.

Pruritus.

The following combinations are recommended by *Med. Record* in the treatment of general pruritus:

℞.	Acidi acetici	gr. xx	1 30
	Lanolini	ʒi	4
	Liq. petrolati	ʒiii	12

M. Sig.: Apply locally night and morning; or:

℞.	Acidi acetici	gr. xx	1 30
	Lanolini	ʒii	8
	Liq. petrolati		
	Pulv. amyli, āā	ʒiii	12

M. Ft. unguentum. Sig.: Apply locally.

Fissure Ani.

The most common cause of fissure of the anus, so states Bjorkmann in *Merck's Archives*, is constipation. Syphilis and hemorrhoids also favor their formation. The small fissure, as a rule, can be easily cured by the application of a 2 per cent. argentin solution or of the silver nitrate stick. In more stubborn cases the sphincter should be mechanically distended to relaxation, or better still, the fissure liberally incised, touched with the paquelin cautery and dressed with nosophen gauze. As a palliative ointment the following combination is recommended:

℞.	Beta-eucainæ		
	Menthol, āā	gr. xv	1
	Ext. belladonnæ	gr. x	65
	Lanolini q. s. ad	ʒi	30

M. Sig.: Apply freely three times a day.

Treatment of Chancroid.

Dr. C. G. Clark, in an abstract in *Oritic and Guide*, states that the first thing to do in the treatment of chancroid is to thoroughly disinfect the lesion and to wash the parts well with green soap and water, followed by alcohol or ether, and then thoroughly cleanse the sores with a bichlorid solution 1-2000. The penis must then be wrapped in gauze saturated with the above solution, which is kept moistened for twelve hours. The gauze is then removed, the sores dried and dusted with aristol. After this treatment the sores should be washed with a 1-5,000 bichlorid solution every three or four hours, dried and a fresh application of aristol made.

Complications must be guarded against; one of these is phimosis or paraphimosis. This should be relieved by slitting

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up the dorsum and laying the glans bare. The rest of the operation for circumcision may be done later, care being taken that the cut surfaces do not become infected by keeping them covered with the antiseptic powder.

In hard chancres the author follows out practically the same line of treatment, except he uses as a dressing equal parts of aristol and calomel. He strongly objects to the usual custom of cauterizing every venereal sore, believing that cauterization delays the process of healing and frequently leaves an ugly scar.

Medicolegal.

Family Physician Not Hearing of Mental Infirmity.—The Court of Appeals of Maryland says, in Watts vs. State, where the former was convicted of murder and an exception was taken to a ruling allowing his family physician to state that he never heard any intimation that he (Watts) was not mentally sound, that there was no evidence that the physician had ever attended Watts himself, or had occasion to question his sanity. Suspicions of this nature, if entertained by relatives, are often sedulously concealed from friends and from the physician of the family; and the court does not think that the mere fact that an attending family physician had never heard of any such infirmity should be admitted, to the possible prejudice of the defendant.

Statements to Physician as to Subjective Symptoms.—The Supreme Court of Wisconsin says, in the personal injury case of Kath vs. Wisconsin Central Railway Co. that in Keller vs. Gilman, 93 Wis. 9, there was an attempt made to formulate the rules governing the admission and rejection of evidence as to subjective symptoms of a patient in a way which should cover all cases. The present case shows how futile the attempt was. It was there said that such statements may be given in evidence when made to a physician for the purpose of treatment, but may not when made to an expert after action brought, in order to enable him to testify as a witness on the trial. This seems clear enough until a case is presented like the present, where the statements are made both for the bona fide purpose of treatment and to enable the physician to testify as an expert on the trial. On principle, the court thinks such testimony should not be admitted. It seems to it to be equally as objectionable as the evidence of subjective symptoms made to a physician for the sole purpose of enabling him to testify as an expert. Whenever such statements are merely narrative and not part of the *res gestae* (essential circumstances of a transaction), their relation on the witness stand is purely hearsay testimony. The rule which admits them when made in good faith before action, solely for the purpose of treatment, is an exception to the general rule excluding hearsay testimony. The exception is evidently based on the idea that there can be no reasonable probability that such statements are made with any self-serving purpose; that there is every reason to believe that they are true, because it would be absurd, not to say stupid, for a patient to make false statements to a physician who is to treat the disease, and who must base his treatment in part on such statements. While there is not that strong probability of truth which is held to make admissible a statement made on the threshold of impending death, there is some similarity in the two cases, in this: that the circumstances seem in each case to negative the idea that testimony would be manufactured, and, on the other hand, to indicate that there would be every inducement to state the truth. It is evident that this condition only exists where the patient seeks a physician for the sole purpose of obtaining treatment before litigation is begun or threatened. If he joins with that purpose an intention to call the physician as an expert on the trial of his case, whether then pending or to be commenced, then there is distinctly present the temptation to manufacture testimony when stating his symptoms and feelings to the physician. An easy way is thus opened to put any quantity of self-serving *ex parte* (from, or on one side) statements before the jury, by simply employing an expert to give a few days' treatment to the patient, and then putting the expert on the stand in his dual capacity of expert and attending physician. The case of Cleveland, etc., Ry. vs. Newell, 104 Ind. 264, was cited in support of the admission of the evidence in question in this case, and the Supreme Court of Wisconsin states that it was fair to say that it seemed to do so; but, it adds, the reasoning is not satisfactory to it, and it holds that evidence of declarations made by a patient to a physician after action is brought or threatened is inadmissible, where it is proposed to call the physician as an expert, notwithstanding that the patient may at the same time, in good faith, be seeking and receiving medical treatment. As touching a minor question in the case, the court holds that the rule is that an expert medical witness can not state what he learns entirely from medical works, unsupported by practical experience of his own, but the rule goes no further.

Duty of City Physician to Care for Smallpox Patients—Compensation.—The Supreme Court of New Hampshire says, in the case of Congdon vs. City of Nashua, that for all the time during which the services were rendered in caring for smallpox patients for which the plaintiff claimed payment under alleged contracts with the board of health elected by the city councils he held the office of city physician, and received the salary attached to the office in full payment for all his services as such physician. The ordinance creating the office of city physician made it his duty "to attend, under the general direction of the overseers of the poor, on all sick paupers, and patients under the care of the city authorities." The powers vested in the board of health of towns are by general law and by the charter of the city vested in the city councils, to "be carried into execution in such manner, by such officers, and with such powers as the city councils shall determine." It was the duty of the city to care for the persons confined, for the protection of the public, because of their affliction with a contagious disease, whenever such assistance was deemed wise or necessary by the board of health. Such persons were, therefore, "patients under the care of the city authorities," on whom the plaintiff, as city physician, was bound to attend. That this duty was to be performed under the general direction of the overseers of the poor did not limit the plaintiff's duty as city physician. The language of the ordinance defining his duty expressly implied that he was to attend on others than paupers, and, under the general statute, the city councils had power to commit the execution of a portion of the power vested in them as a board of health with reference to contagious diseases to the overseers of the poor and a city physician. If not paupers, the inmates of the smallpox hospital were patients under the care of the city authorities. Paupers and other patients afflicted with a contagious disease were not excepted from the class for which the physician was required to furnish medical attendance. The purpose of the ordinance creating the office of city physician, and prescribing his duties, was to provide such medical attendance as the city was legally liable to furnish. If the board of health had power to contract in behalf of the city for medical attendance on persons in quarantine, in case the city physician was unable, unwilling, or incompetent to furnish such attendance as was required, they had no authority to raise the salary of the city physician, or to bind the city to pay him more than the sum for which, by accepting the office, he agreed to perform its duties. In the absence of information as to the powers conferred on boards of health or health officers, it would be assumed that by the election of officers with such titles the city councils had expressly or impliedly invested them with the powers of like officers in towns. In Nashua the duties of the board of health officers are the same in substance as those of health officers or boards of health in towns for the prevention and removal of nuisances, with the exception that the execution of the power to make regulations is retained by the city councils, and the duty of the health officers is confined to carrying into execution ordinances and rules on the subject made by the councils. No power as to contagious diseases, such as is vested in health officers under the statute, appears to have been confided to the health officers of Nashua. If there was evidence not disclosed by the case from which it could be inferred that it was intended to intrust to

them the execution of the power of quarantine, the fact that the city councils had provided another officer to supply the necessary medical attendance established that the furnishing of such attendance was not committed to the health officers. There being nothing in the case tending to show that the health officers had been authorized to furnish medical attendance at the expense of the city to persons in quarantine, they could not make a valid contract with a third person for that purpose. However, although the plaintiff's contract as city physician was to perform the service for the salary, it was within the power of the city councils to give or agree to give him additional compensation for service more onerous than was anticipated.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal.

May 31.

1. The Surgery of Nephritis. (To be continued.) George M. Edebohls.
2. *The Relation of the X-Rays and Radio-Active Solutions to Examination of the Stomach. Sinclair Tousey.
3. Treatment following the Bloodless Reduction of Congenital Hip Dislocation. Dexter D. Ashley and Frederick Mueller.
4. *An Operation to Reach the Lower Ureter by an Extraperitoneal Route. T. C. Witherspoon.
5. *Vasomotor Center in Inhibition of the Heart (Concluded). Charles E. Dahl. Bajous.
6. Case of Diabetes Mellitus; Gangrene of the Foot; Operation; Recovery. E. P. Stone.

2. Stomach Examinations.—Tousey gives the results of his observations with radioactive solutions and the *x*-rays in the examination of the stomach, illustrating some of his experiments. He finds that the radio-active and fluorescent solutions as prepared by him with quinin bisulphate and fluorescin, are innocuous when given by the mouth or subcutaneously, but do not produce singly, or in combination, sufficient fluorescence to be of value in the examination of the stomach without the use of some additional light to excite their fluorescence. They will, however, in some cases be of the greatest assistance in the diagnosis of stomach lesions, and in some cases be of advantage in the *x*-ray treatment.

4. The Extraperitoneal Route to the Ureter.—This method, adopted by Witherspoon, consists in an incision four inches long near the lower end of the rectus, extending upward from its insertion, parallel with its fibers. Then the muscle is divided longitudinally by blunt dissection through the middle and the fascia below the semilunar fold of Douglas being divided, the peritoneum and its fatty layer come into view. The lower ureter is then exposed extraperitoneally in the following way: The bladder and its fatty covering in the portion of the wound are pushed upward and inward, and the peritoneum separated from the abdominal wall as far as the iliopectineal line. The index finger then enters the pelvis at the side of the bladder, pushing upward and inward the fold of peritoneum known as the lateral false ligament of the bladder. After passing the finger well down to the base of the bladder, the separation of the peritoneum from the pelvic wall is carried posteriorly as far as the vas deferens. The fascia here is loose. The vas deferens is a good dividing line for the pelvis, as passing down on its outer wall it lies midway between the symphysis and the center of the sacrum. He describes its course here, and shows how it passes inward over the obturator and recto-vesical fascia to the posterior wall of the bladder passing above the ureter. Where a ureteral catheter has been introduced or a stone has lodged in the lower ureter, there will be no difficulty in locating it. Where these do not exist, it becomes necessary to have some guide. If the vas deferens is followed about two inches onward from the point of crossing the obturator vessels the ureter will be found just behind it. This point is from three-fourths to one inch from the point where the vas deferens turns inward to the bladder. The vas deferens and ureter are both raised with the peritoneum when dissection is made. The ureter is freed from the delicate fibers which bind it to the peritoneum and is brought clearly into view. Some three or four inches may be examined, and the index finger can follow it to the brim of the pelvis. He points out the relation of the obliterated hypogastric artery to the operation. The advantages are: 1. It is extraperitoneal, and avoids the danger of peritoneal infection. 2. The opening is directly over the route of the ureter, and offers a good view of that organ through the small cut. 3. It allows of thorough palpation through the peritoneum, of both kidneys and ureters, and an exposure of the ureter on the side of the incision for extraperitoneal operation on its lower end. In many cases thorough palpation may be desirable. 4. There is a bloodless field of operation, and no forceps are in the way. 5. Drainage is usually necessary after opening the ureter, which may be carried through the lower end of the rectus, and does not leave the prospect of hernia that a para-Poupart incision does. 6. Dissection is not difficult, and may be carried out by any reasonably prepared surgeon. In conclusion, he enumerates the methods proposed for operation on the ureter.

5. The Vasomotor Center in Cardiac Inhibition.—Sajous, in the conclusion of his paper, says that really no cardiac inhibitory apparatus exists as a physiologic entity. The life of the cardiac muscle is perpetuated by the action of the vasomotor centers, and vaso-constriction causes abeyance of the functions of the organ.

American Medicine, Philadelphia.

May 31.

7. *Study of 91 Operations for the Relief of Various Forms of Hernia, with their Complications. Orville Horwitz.
8. *Malposition of the Head (Torticollis, Canted or Tilted Head), with Resulting Ill-health. Spinal Curvature, etc., Due to Eyestrain. George M. Gould.
9. *Some Facts Concerning Radium and the Use of the Intragastric Radiode. J. A. Storck.
10. *Treatment of Pneumonia. R. S. Thornton.
11. Preliminary Report of a Case of Splenomyelogenous Leukemia Showing Marked Improvement Under the Use of the Roentgen Ray. Charles H. Weber.
12. *The Therapy of Acetanilid. J. B. Johns.
13. The Medical Inspection of Schools. Helen MacMurchy.

7. Hernia.—From a study of the cases discussed, the following conclusions, seem to Horwitz, to be warranted:

1. The safety of the patient as well as the lowering of the mortality in strangulated hernia depends on gentle taxis being exerted for a short period, which, if unsuccessful, should be succeeded by an immediate operation.
2. Herniotomy for the relief of strangulated hernia in the aged is not a dangerous operation, provided it is performed as soon after the constriction has taken place as possible.
3. An inflamed hernia should not be treated by taxis, but should be subjected to an operation.
4. No one method of attempted radical cure is applicable to every variety of rupture. The Bassini is suitable to the largest majority. The Bloodgood for those in whom a large abdominal ring and weak or atrophied conjoined tendons exist. The relief of special forms and conditions of hernia must be met by the ingenuity of the surgeon, selecting the operation to the indications presented.
5. The palliative operation is applicable to a large number of selected cases of reducible hernia, in which the protrusion can not be kept within the abdominal cavity by means of a truss, and also in some forms of incarcerated hernia.
6. A radical cure may be safely attempted on patients who have reached their sixth year and on those who have arrived at their sixtieth year.
7. Individuals who submit to what is known as the "palliative operation," should continue to wear trusses after recovery.
8. In cases not applicable to a routine method of operation, the surgeon should strive to do what, in his judgment, would be the best means of effecting the removal of the entire neck of the sac on a level with the parietal peritoneum; he should, if possible, firmly close the opening in the peritoneum after the removal of the sac; he should obliterate the depression of the peritoneum in the vicinity of the internal abdominal ring, bring in apposition the structures, and close the apertures which form the canal through which the rupture protrudes.
9. An aseptic result following a radical operation, with primary union, is essential to obtain a permanent cure of hernia.
10. In cases of undescended testicle associated with hernia, every effort should be made to save and transplant the organ.
11. The method of operating for umbilical hernia suggested by Mayo is probably the most satisfactory for that variety hitherto suggested.
12. Absorbable sutures are preferable to those of non-absorbable material.

8. Malposition of Head, Spinal Curvature, etc., from Eyestrain.—Gould calls attention to this cause of torticollis and spinal curvature, and gives his method of examination. He makes the patient sit erect, head upright, facing the test-letters in such a position that any abnormality in position may be quickly observed. If the patient's head remains or returns to any abnormal inclined, twisted position, the question is

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whether he is right-handed and right-eyed. If so, the axis of astigmatism causing the malposition of the head is probably in the right eye, and vice versa. All astigmatism that can produce head-canting must be from 8 to 25 degrees, usually 10 to 18—to either side of the axis 90 or 180. If the tilt of the head is dextrad, the axis of astigmatism of the dominant eye is in the neighborhood of 75 or 165 degrees. If hyperopic, in the great majority it will be about 75; if myopic, the larger figure. If it is sinistrad, the axis of the dominant eye will usually be about 105, rarely 15. If the head is thrown directly backward or forward in a stiff and constrained position, it is probably due to hyperphoria, and the effort to bring the two visual axes to a horizontal. In most cases the tilt is toward the right, because most young people are right-handed and right-eyed and hyperopic. The number of patients with this defect is astonishing, and the number of those with secondary and unsuspected abnormally curved spines is not less remarkable, though this may not be discovered until it is revealed by examination. He reports briefly several cases and thinks that the suggestiveness of the ocular cause of the head and spinal deviations will probably throw much light on other obscure problems of ophthalmology, neurology, etc. One can foresee how it may be one of the causes of heterophoria of all kinds, especially cyclophoria, and of a number of chronic and inflammatory conditions of the fundus, of strange reflex ocular neuroses, etc., and explain many failures to cure migraine, hysteria, neurasthenia and other reflex neuroses.

9. **Radium.**—The intragastric "radiode" consists of an aluminum capsule containing 10 mg. of 7,000 radio-active radium, attached to a flexible copper wire passed through a suitable rubber tube, the capsule being allowed to project beyond the end of the tube, manipulated so as to come as near as possible in contact with the growth in the stomach. Storck has had experience with it in only one case, but it has not been very successful, though the patient thinks he eats better.

10. **Treatment of Pneumonia.**—Thornton insists on a trained nurse if possible, an equable temperature of 65 to 70, good ventilation, moist atmosphere perhaps medicated with some soothing substance, concentrated and nourishing food. Poultices he would reject, or if used at all, they should not be continued beyond the congestive stage; a smart mustard plaster retained until the skin is thoroughly reddened and then a cotton jacket and hot-water bottle, if continuous heat is desirable, will give just as satisfactory results. The general constitutional treatment must be that of a toxemia; keeping the bowels and kidneys active, the allaying of pain, restlessness, sleeplessness, etc., for which he advocates codein, and he would use aconitin to quiet the circulation and reduce the temperature. In medicinal doses it does not depress the heart. Digitalis and strychnia are especially valuable near and after the time of crisis, and he pleads for the use of these active principles rather than the uncertain galenic preparations. As regards alcohol, he does not employ it at all. Strychnin and digitalin have a better permanent effect, and in cases of collapse, atropin is greatly preferable. Of late years the method of treatment by the use of creosote or creosote carbonate has given good results, and the evidence in favor of its beneficial action in pneumonia is accumulating. The average adult dose of carbonate or creosote is 10 m. or 0.6 c.c. every three hours. The value of the treatment is proportionate to the earliness of its adoption. He does not speak well of any organic treatment of pneumonia so far as our present experience of it goes, but reports briefly a bad case cured under the methods above described.

12. **Acetanilid.**—Johns thinks acetanilid is deserving of a more extended use, and it has generally been given in too large doses. It does not need to be given in as large a dose as antipyrin. The dose may be said to range from 2 to 8 grains with a maximum for twenty-four hours of about 30 grains. Only exceptionally and in well-selected cases, is a dose of 10 grains advisable. Acetanilid expends itself in the domain of the sympathetic nervous system, and is particularly inimical to morbid reflexes in the sensory sphere. Small doses, 1 to 2 grains, produce a sense of ease and quiet within without a feeling of depression. It is primarily an analgesic. Its action in fever is on the sympathetic nervous system; the result of this action is an absolute loss in the production of heat and reduction of metabolism, though they can not fully account for the antipyretic action. Summing up, the effects on the nervous system are sedative, analgesic, antipyretic, antispasmodic and antiperiodic. In addition to being beneficially palliative, these effects are, in a large measure also curative. It is our best remedy for the relief of pain not due to local inflammation, such as reflex pain, etc. It is a valuable adjunct to other remedies as a modifier of action, such as quinin, salicylates, opium and calomel. In the last fifteen years he finds that the effect of giving acetanilid with quinin was more pleasant to the patient and better results from a larger quantity of acetanilid and a smaller quantity of quinin. In addition to the modifying effects on the main remedy, we have the analgesic and antipyretic effects so essential in the treatment of rheumatism. It is antagonistic to opium in some respects; supplementary in others. It takes the soporific influence from opium. It relieves without the resulting drowsiness and sleep. It is of value in combination with calomel in the treatment of many acute and subacute maladies in children. He knows no condition, he says, where a small dose of calomel with or without sodium bicarbonate is indicated where acetanilid could not be advantageously added. In doses of one-half grain, it is a good substitute for the Dover powder formerly used. Treatment with calomel and acentanilid in small doses every hour, followed by a mild purgative in intestinal troubles, affords early relief and makes for a speedy cure. He says when the indications for treatment are not clear and you do not know what to do, give acetanilid. It won't mask the diagnosis or interfere with the inauguration of any other course of treatment. When only psychic features of the case demand drug treatment, give it in two-grain doses. It is harmless as any placebo, and may be relied on to have a favorable mental effect.

Medical Record, New York.

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14. *Treatment of Pneumonia. Jose M. Ferrer.
15. *Renal Redecapsulation. George M. Edebohls.
16. *Operative Surgery Applied to the Seminal Vesicles; a Demonstration of Some New Principles. Eugene Fuller.
17. *Who is Underfed? Heinrich Stern.
18. Tetanus Treated by Intraneural Injection of Antitoxin. John Rogers, Jr.
19. Multiple Gonorrheal Periarthritis in a Child, Probably Due to Inoculation Through a Wound. Henry Helman.

14. **Pneumonia.**—The remedies favored by Ferrer are quinin, digitalis and cardiac stimulants which seem to act well. He advises isolation, an equable temperature, relief of pain and vomiting, the judicious use of morphin to relieve irritability and insomnia when cyanosis and edema are not present, bromids in some cases, compound spirits of ether in cases of asthmatic tendency is occasionally useful, relief of tympanites by calomel and soda, colon irrigation, plenty of cold water by the mouth to relieve the fever, cold pack in cases of very high temperature, stimulants for the heart for which he uses alcohol, strychnin, etc., hypodermoclysis in some cases, rectal injections of normal salt solution and lastly a mixed liquid diet suited to the patient's inclinations and thorough ventilation are insisted on.

15. **Renal Redecapsulation.**—Edebohls reports a case where this was performed and maintains that the removal of the new capsule presents no greater technical difficulties than removal of the ordinary renal capsule.

16. **Surgery of the Seminal Vesicles.**—The method adopted by Fuller consists in seminal vesiculotomy or the exposure of the cavity of the seminal vesicles by means of a free longitudinal incision. Following this he uses drainage, curettage and removal of the intra-seminal vesicle neoplasms. Another feature which he has added to the above is freeing the organ through peripheral dissection of the surrounding inflammatory adhesions, a sort of decapsulation as it were. In his former article, published in THE JOURNAL of May 4, 1901, he reports his first five operations. In the present one he gives the results in 21 cases, which he divides into five groups. Group 1

consisted of extremely chronic cases of seminal vesiculitis, with lesions chiefly of sclerous tissue. Six of his operative cases were of this group. In 4 of them his results were good. In 2 the clinical results were negative. Group 2 consisted of cases of seminal vesiculitis, less chronic than those of Group 1. The intravesical catarrh was still a prominent feature, the sclerotic lesions not having fairly developed. Eight of his cases were of this character. Three out of the 8, however, are recent cases, just having been discharged from the hospital in a satisfactory condition. He expects good results; 3 of the other 5 he considers gave positively good results. Two cases were lost sight of too soon to be positive as to the results. Group 3 consists of cases of acute diffuse peri-seminal vesicle abscess of gonorrheal causation. Five cases come under this head. In all the results were particularly good. Groups 4 and 5 have one case each; the first, that of adenoma involving the wall and nearly causing the obliteration of the cavity. The result of the removal was good. In Group 5 the lesion was tuberculous involvement, and removal of the sac caused only temporary relief. A brief clinical recital of the individual cases follows. In conclusion, he states what he considers the advantages of this method, and advocates it in many cases of Group 1, some in Group 2 and all of Groups 3 and 4. For the liberation of pus in this deep region the operation under consideration is better than the three other surgical methods in vogue, namely, perineal section, incision through the rectal wall and perineal incision through the prostate.

17. **Underfeeding.**—Stern maintains that we generally eat too much. The animal functions, the tonicity of the structure and the organs and the normal intrasystemic equilibrium are better maintained, the more the sum of ingested assimilable nutrients is limited to the amount absolutely necessary to keep the body in metabolic balance. A diet of 35 to 50 calories for each kilo of weight, the usual standard of to-day, is too much. He thinks a lower figure for the majority of cases ample, and a small body weight is not necessarily an indication of underfeeding or one requiring overfeeding.

Medical News, New York.

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20. *Lesions Peculiar to the Pancreas and Their Clinical Aspect. Eugene L. Opie.
21. *Prophylaxis and Medical Treatment of Diseases of the Pancreas. Glentworth R. Butler.
22. Classification and Symptomatology of Diseases of the Pancreas. Charles G. Stockton.
23. *Renal Decapsulation from the Pathologist's Point of View. Joshua M. Van Cott.
24. Cancer of the Intestine. J. G. Sherrill.
25. Fracture of the Base of the Skull as a Cause of Epilepsy; Report of Case. Charles J. Aldrich.

20. **Pancreatic Lesions.**—Opie's paper is a general review of the pancreas and its lesions so far as we know them. He begins with a few general anatomic and physiologic data, and calls attention to the characteristic lesion from pancreatic secretion in other tissues, namely, fat necrosis, which often serves as an index to pancreatic disease; describes acute hemorrhagic pancreatitis, which may carry a person off within forty-eight hours, and its association with gallstones, though as compared with cholelithiasis it is a rare disorder. What is said as regards acute hemorrhagic pancreatitis is applied, with some modifications, to the condition known as gangrenous pancreatitis, which is a secondary stage of the hemorrhagic lesion. It is usually associated with suppuration limited to the lesser peritoneal cavity, and its treatment is that of localized peritoneal abscess. Other conditions, such as obstruction of the ducts and the relation of the pancreas to carbohydrate metabolism, are noted at some length, especially the connection of pancreatic lesions with diabetes when the islands of Langerhans are involved. He thinks the relation of diabetes mellitus to lesions of the pancreas explains the frequent association of diabetes with other diseases, such as cirrhosis of the liver and the remarkable condition known as bronzed diabetes, is an excellent illustration of the coexistence of cirrhosis and chronic pancreatitis. Opie holds that when diabetes is found in an individual suffering with cirrhosis of the liver, the former disease is dependent on the coexistence of chronic interacinar pancreatitis, doubtless produced by some etiologic factor—in some cases alcohol—which is responsible for the hepatic disease. In this case, at least, it is possible to make a diagnosis of pancreatic diabetes. Also when during life diabetes accompanies advanced arterial disease, it may with much probability be attributed to chronic interacinar pancreatitis. He does not, however, consider that our knowledge of the relation of the pancreas to diabetes can clear up the practical therapy of the condition. The results of organotherapy have not been so uniformly successful as to warrant expectation of more than some slight benefit.

21. **Prophylaxis of Pancreatic Disease.**—Butler considers that the appreciation of the causes of pancreatic disease is necessary for prophylaxis. Among them are syphilis, tuberculosis, arteriosclerosis, cardiac, pulmonary and renal disease, acute and chronic infections, obesity, non-pancreatic diabetes, neoplasms, catarrhal and bacterial disorders and affections of the liver and gall bladder, especially cholelithiasis. If these can be successfully treated the liability to pancreatic disease is lessened, as beyond this we can not go. With our present state of therapeutics, the medical treatment is confined to the relief of symptoms, pain or jaundice by the usual methods, and the maintenance of the strength of the patient by rest, feeding, etc. When the presence of pancreatic calculi is diagnosed, the injection of pilocarpin has been reported successful by Ehrhorst. The practical results of pancreatic therapy have been disappointing, but where there is a lack of pancreatic juice, the use of efficient pancreatic preparations has, in some cases, improved the digestion of fats and proteids, and the internal use of oxgall has aided in the assimilation of fats.

23. **Renal Decapsulation from the Pathologist's Point of View.**—Van Cott discusses the anatomy and physiologic conditions of the kidney, and concludes that on teleologic grounds the renal circulation can not be restored by decapsulation and substitution of the capsula adiposa. No amount of restoration of the renal circulation would restore the integrity of the cortex. Chronic nephritis as a local expression of a general disease will yield only to such treatment as is calculated to cure the latter, and there can be hope of only arresting the progress of the renal degeneration. The degenerated portions will never regenerate. He reports experiments on cats to test these opinions, and the findings are in harmony with these conclusions.

Boston Medical and Surgical Journal.

May 2.

26. *Enterostomy in Peritonitis. Robert B. Greenough.
27. *A Comparative Study of the Death Rates for the State of Massachusetts for the Years 1850, 1875 and 1900. William F. Whitney.

26. **Enterostomy in Peritonitis.**—Greenough discusses the advantages of enterostomy together with its disadvantages, the method of performing the operation with the Mixter tube and sums up his points in the following:

1. The obstruction of the intestine in diffuse peritonitis is the result of a combination of causes.
2. The most important cause is suspension or paralysis of peristalsis.
3. Paralysis of peristalsis is due to inhibition, to toxic paralysis and to the paralysis of distention.
4. Mechanical causes, such as infiltration of the bowel wall and light adhesions in certain cases contribute to this paralysis.
5. Pure mechanical obstruction due to adhesions is the result of chronic or local peritonitis of at least some days' duration.
6. Enterostomy is indicated in addition to other operative measures in the graver forms of diffuse peritonitis.
7. Its greatest advantage is the drainage of the gases and decomposing contents of the bowel and the relief of paralysis of peristalsis.
8. By enterostomy the surgeon obtains direct control over the intestine for lavage and for the introduction of stimulants, nourishment, fluids and cathartics.
9. For the relief of paralysis of peristalsis primary enterostomy is to be preferred to the secondary operation.
10. Enterostomy is best performed by the use of the Mixter tube.
11. The cecum is the most satisfactory part of the bowel for a primary enterostomy, and the jejunum is to be avoided.
12. Spontaneous closure of the fistula may be expected when the cecum is opened, if the opening is kept below the level of the parietal peritoneum.
13. By the systematic use of enterostomy in the graver forms of diffuse peritonitis the number of patients dying on the second, third and fourth days after operation is reduced.
14. The symptoms of visible peristalsis and spasmodic pain in intestinal obstruction indicate a mechanical cause for the obstruction.
15. The persistence of these symptoms, unrelieved by enemata and cathartics, is an indication for operation.
16. Under these circumstances the cause of the obstruction should be removed if possible by operation.

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17. In advanced cases of obstruction of this form enterostomy of the coil of intestine nearest above the obstruction should be done.

A long series of abstracts of cases closes the paper.

27. **Death Rates in Massachusetts.**—The death rates for three years, 1850, 1875 and 1900, separated by twenty-five year intervals, are compared by Whitney, who finds that the ratio in the earlier years was decidedly less than in the later ones, and that the rate for females was lower than that for males. The ratios for age were also increased in 1875 over 1850 and over thirty years of age also in 1900, though there was a decided drop in the earlier period of life up to thirty. The only comforting point, he says, is that during the last twenty-five years it has been apparently less than before. A more detailed study of the age period shows a marked decrease in 1900 over every period from 1 year to 80 for both sexes, but from that time to the end of life there is a distinct increase. It seems that the progress that has been made is greater in the early periods. Still the death rates for infants under one year is greater than in 1850. He suggests that the decline of maternal nursing of later years has something to do with this result. Children that were born in 1850, according to his figures, had a better chance of reaching the end of the first year, while from that time on infectious diseases claimed many victims, but those who reached the age of 30 could look more confidently forward to old age. In 1875 the new era of medicine had just begun with the passing of the quieter modes of living, the crowding in cities, the natural checks were broken down and the result was what might have been expected. At the present time, however, preventive medicine and hygiene have more than offset the evil effects of our concentrated, high-pressure civilization up to 50 years of age. After that science appears to be powerless against the diseases of old age.

Cincinnati Lancet-Clinic.

May 21.

28. *Electrothermic Hemostasis in Abdominal Surgery. W. H. Wenning.
29. *Some Guiding Principles of Ophthalmic Practice as Regards a Few of the Common External Diseases of the Eye. Derrick T. Vail.

28. **Electrothermic Hemostasis in Abdominal Surgery.**—Wenning points out the advantages of the thermic angiotribe devised by Downes. In the first place, an ideal asepsis; second, a gain of time; third, instead of a puckered-up bunch of tissue grasped in a ligature, we have a more or less narrow ribbon of perfectly smooth and clean membrane which does not disturb the relationship of the different parts and lessens the danger of adhesions; fourth, pain and shock are almost entirely obliterated. In his experience the absence of shock and freedom from pain after operation are most remarkable features in the after-treatment of cases. As regards the danger of secondary hemorrhage, he considers it nothing provided the instruments are in working order and are properly applied. Ten cases are reported of the use of this instrument with good results.

29. **Common External Diseases of the Eye.**—The disturbances noticed by Vail are abscess formation in the lids, hordeoli and acute chalazions calling for moist warm applications at repeated intervals. Blepharitis marginalis suggests hydrogen peroxid or warm sodium bicarbonate to dissolve the crusts along the free border of the lids. Nitrate of silver is dangerous in the patient's hands and should only be used by the surgeon. Acute conjunctivitis calls for the open treatment, by which he means the avoidance of bandages and assisting nature in ridding the eye of irritating influences by frequent bathing; cold applications, antiseptic drops and astringent applications to the everted lids, protective sun glasses, vaselin ointment and rest of the eyes from work assist in the milder cases. In desperate cases we should remember the dangers of too much edema of the lids and have recourse to leeching, light ice compresses and canthotomy. Abrasion of the cornea calls for the roller bandage, with recovery in a surprisingly short time if this is applied. It is well, however, to douche the conjunctival sac with a warm solution of boric acid so as to get rid of any loose irritating substance. The patient should not use cocain. Abrasions frequently heal in twenty-four hours without it. The bandage protects the eye, allows healing to go on, shuts out irritation, prevents infection by the patient's hand or handkerchief, etc. Foreign bodies in the cornea should be removed as soon as the proper instrument for their extraction is sterilized and cases treated for abrasion left as above. Phlyctenular keratitis generally implies some systemic derangement, as sometimes after fevers or with certain disturbances of digestion. The proper local treatment is to wipe off the blister after cocainizing the eye by means of a small bit of cotton wrapped rather tightly on a cotton carrier and dipped in boric solution. Insufflation of calomel powder after the blisters have ruptured or been swept off gives the best results, or if the bed of the ulcer has been deeply infected we may expect good results from the application of ½ per cent. silver nitrate solution to the everted lids followed by Y. O. ointment ½ per cent. The eye should not be bandaged and the patient kept in the house out of the sunshine. Good food and proper hygiene are as important as local treatment. Ulcer of the cornea is sometimes treated as above, but there is no certain way of killing off the bacteria except by the careful application of pure carbolic acid solution or the actual cautery.

St. Louis Medical Review.

May 5.

30. The History of Spectacles. Carl Barck.

May 12.

31. Some Notes on the Care of Premature Infants. V. P. Blair.

Northwestern Lancet, Minneapolis.

May 15.

32. *Treatment of the Early Stage of Pelvic Inflammation, with Some Points in Diagnosis. A. W. Abbott.
33. *The Early Diagnosis of Tuberculosis. W. H. Darling.

32. **Pelvic Inflammation.**—The conditions of early gonorrheal infection and inflammation are reviewed by Abbott, who thinks that a thorough understanding by the laity of the dangers of gonorrhea and abortion would make more secure the lives and happiness of thousands of women and do away with two-thirds of the work of the gynecologist. Septic pelvic infections are generally preventable. Prompt rational treatment based on a knowledge of the bacteriology of pelvic inflammation will save many lives and cut short much suffering. Early and efficient vaginal drainage when indicated will not increase the difficulties of subsequent radical operation, but will add to its safety and make a more conservative operation more feasible and perfect.

33. **Tuberculosis.**—Darling thinks that many of the symptoms formerly classed as early symptoms in diagnosis of tuberculosis really belong to the more advanced stages and that cough, expectoration and hemorrhage do not occur early in the disease. Emaciation and muscle weakness are the first constitutional symptoms in nearly 90 per cent. Harsh respiratory sounds are the earliest local symptoms in 95 per cent. Except for the early leucopenia and anemia pure tuberculosis has little effect on the blood and the diagnostic value of Koch's tuberculin, conservatively used, can not be overestimated. Bacteriologic diagnosis can only be made after there is disintegration of tubercles and free communication between the diseased area and the bronchus. When bacilli appear in the sputum the disease is in an active stage and there has been considerable breaking down of tissue. Treatment can then only be palliative. The hope of cure is small, but we can prevent the victim from being a source of danger to his associates.

Southern California Practitioner, Los Angeles.

May.

34. Medical Legislation. W. E. Foley.
35. *The Localization of the Placental Site. Edmond M. Lazard.
36. Lung and Intestinal Troubles in Young Children. Kate Wilde.
37. Some Impressions of European Accessory-Sinus and Ear Work. Ernest W. Fleming.

35. **The Placental Site.**—Lazard notes the lack of mention of localization of the site of the placenta in the usual text-books and journals, and gives the results of his experience during his service as externe under Leopold in Dresden in 1901. Leopold, after noting the peculiar relation of the course of the tubes to the placental site in some twenty cases of cesarean section, formulated the following rule: If the tubes converge upwards on the anterior uterine walls to the fundus, the site

of the placenta is the posterior uterine wall; if, however, the tubes assume an approximately parallel course along the sides of the uterus, the placenta is situated anteriorly. This is part of the routine in the Dresden Frauenklinik, noted in every obstetrical history. The diagnosis is made as follows: The round ligaments are palpated with the palmar surfaces of the index, middle and ring fingers, and are followed up to their insertions in the uterus, thus locating the tubal insertions. The course of the tubes are marked on the abdominal wall with a blue pencil. The tubes and ligaments are more readily felt by affecting a slight uterine contraction during the later months of pregnancy and are also more readily felt during a pain in labor. The left tube is more easily palpated; it is usually necessary to feel more posteriorly for the right. The explanation of the peculiarity as given is that the location of the placenta causes a bulging or broadening on the wall on which it is located at the expense of the opposite. In some fifty-eight cases where a diagnosis was made and there was a chance to verify it at cesarean section, there were only two where it failed and there special conditions existed. The advantages of a knowledge of the location of the placenta in cases of cesarean section, etc., are obvious. As regards placenta previa and its influence on the course of the tubes, Lazard is not able to speak positively. He thinks, however, that the placenta in the lower uterine segment would not affect the insertions and that the tubes would be approximately parallel along the side. The diagnosis of placenta previa, therefore, would not be helped by this method; it would have to be made otherwise.

Columbus Medical Journal.

April.

38. Out of Door Treatment for Tuberculosis at the Columbus State Hospital. George Stockton.
39. Colds. C. T. Linhart.
40. *Tonsillitis as a Prodrome to Acute Articular Rheumatism. A. C. Miller.
41. Relation of the Medical Practitioner to Preventive Measures Against Tuberculosis. Arthur Newsholme.

May.

42. Reason for the Existence of the Association of Assistant Physicians of the Ohio State Hospitals and Its Policy. G. T. Harding, Jr.
43. Interstitial Keratitis. C. S. Means.
44. Proctitis. E. A. Hamilton.

40. Tonsillitis and Rheumatism.—Miller has had a number of cases of rheumatism preceded by tonsillitis in apparently causal relation and gives the opinions of Osler, Poynton, Paine, Menzer and others as to the etiologic relation of tonsillar inflammation to rheumatic disease. He thinks that whenever possible we should urge on the patient suffering with tonsillitis the necessity of care and careful attention to the directions laid down as to the care of the throat and that the salicylates should be given all through the attack and continued for one or two weeks after convalescence has begun; the necessity of a proper care of the body during convalescence and for a time afterward in regard to exposure, dampness and severe exertion should be insisted on.

Medical Fortnightly, St. Louis.

May 10.

45. Radium. Heber Robarts.
46. *Chorea and Graves' Disease. Frank R. Fry.
47. Specimen of a Gall Bladder Injured by Gunshot Wound in the Abdomen. F. G. Nifong.
48. Presentation of a Case of Cholecystitis with Fistula Into the Duodenum. Walter Baumgarten.

46. Chorea and Graves' Disease.—Fry remarks that of late there have been some publications pointing out the existence of a relation between chorea and Graves' disease. The parallelism has been summed up by Sutherland in *Brain* for 1903, showing many points of resemblance. Fry calls attention to the fact that he published a case in *The Journal of Nervous and Mental Disease*, September, 1892, which so well illustrated the subject that he thinks it worth while to here offer a few quotations. The patient had a decided tremor with chorea and later developed all the symptoms of Graves' disease. He has also lately seen a case of marked exophthalmus with the usual syndrome of juvenile chorea in pronounced form in a boy of twelve. In his earlier paper he noted the fact that choreic movements were not alone adequate for the diagnosis and, in fact, that the prechoreic stage of the chorea has been described as chorea. The relative diagnosis of the value of the spasm on the one hand and other choreic symptoms on the other, he thinks, will have to be settled in each individual case.

International Clinics, Philadelphia, Vol. I, 14th Series.

49. *The Chlorid Reduction Treatment of Parenchymatous Nephritis. F. Widal and A. Javal.
50. *Adonidin: A Clinical Study. Reynold Webb Wilcox.
51. *The Therapeutic Applications of Colloid Silver. Drs. Netter and Salomon.
52. What Is the Cure for Neurasthenia? Robert T. Edes.
53. The Treatment of Gastric Neurasthenia and Allied Conditions. George W. McCaskey.
54. *Increased Prevalence and Mortality of Pneumonia During the Last Sixty Years, with Reference to Its Prevention and Treatment. Nathan Smith Davis.
55. *Practical Application of Cryoscopy to Medicine. Henry W. Cattell.
56. *Nephritis of Gastrointestinal Origin. Henry Baird Favill.
57. *Early Diagnosis of Pulmonary Tuberculosis. James J. Walsh.
58. *Angioma and Its Treatment. Carl Beck.
59. *Critical Review of Methods of Intestinal Anastomosis, with Especial Reference to the Connell Suture. A Report of Five Cases. John G. Clark and John W. Luther.
60. Complications met in the Surgical Treatment of Diseases of the Testicle. J. McFadden Gaston, Jr.
61. Observations on Gastric Intestinal and Liver Surgery in the German Clinics. Charles P. Noble.
62. A New Surgical Mallet. Frederick Griffith.
63. The Non-Operative Treatment of Inflammations of the Genital Tract. Francis H. Davenport.
64. Non-Operative Treatment of Chronic Ovarian Lesions. Daniel H. Craig.
65. Peripheral Neuritis. William Broaddus Pritchard.

49. The Chlorid Reduction in Nephritis.—Widal and Javal report a study carried out on a patient with nephritis in which the reduction of chlorids in the diet was regularly and systematically tried at intervals. The conclusions to which they come is that the best treatment for certain stages of the disorder is to lessen for a while the absorption of chlorids. Milk, which has been empirically found to be so valuable, owes its value largely to the lack of salt and experiments show that a diet can be found containing even less chlorids than milk. A variety of forms of solid food may be taken by themselves or in combination with milk, providing no salt is added, and may be an excellent aid in the treatment of nephritis by chlorid diminution.

50. Adonidin.—This is a glucosid from false hellebore (Adonis vernalis) and has been studied by Wilcox, who here gives his results with sphygmograph tracings. The remedy, he thinks, has a field of usefulness not entirely supplied by digitalis. This is in its promptitude of action and its freedom from cumulative effect. The objection to it is that it is irritating, which may prevent its long-continued use.

51. Collargol.—The history of this substance, its discovery by Carey Lea in 1889, and its introduction into medicine by Crede, is reviewed by Netter and Salomon, who speak of the usefulness of the remedy by intravenous injection as well as local treatment. They do not think the intravenous method dangerous, and say it should be resorted to in all cases that seem truly serious where the remedy is indicated, such as the majority of infectious diseases, pyemia and septicemia, generalized or attenuated puerperal infection, infectious endocarditis, cerebrospinal meningitis, severe scarlet fever, associated diphtheria, severe forms of typhoid, some types of tuberculosis with pneumonic tendency, pneumonia, bronchopneumonia, rheumatism with vicious tendencies, grippe, appendicitis, etc.

54. Pneumonia.—Davis considers that the modern treatment of pneumonia fails through the lack of active efforts to lessen pulmonary and cardiac congestion, reduce the fever and permit an early crisis by the old-fashioned methods of the use of venesection, tonics and the general so-called antiphlogistic and blood-letting treatment of pneumonia in favor during the first half of the nineteenth century, as contrasted with the expectant method of later years and the use of cardiac tonics and stimulants that have been too much given, especially the use of alcohol, which he considers damaging under all circumstances. If digitalis and carbonate of ammonium were used in combination with strychnia instead of alcohol the resulting fatality in a large proportion of cases would be avoided.

55. Cryoscopy.—The history of cryoscopy is given by Cattell, who finds that it has a valuable though limited field of useful-

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ness. Its application is easy; it can be done at the bedside. Repeated cryoscopic urinary examinations in conjunction with those of the blood afford a valuable means of determining the presence or absence of renal and cardiac insufficiency, more particularly if ureteral catheterization can be performed. It should always be supplemented by the test for electric conductibility, the methylene blue test, the dilution test and other methods. It can be employed, according to Clowes, as a quantitative method for the determination of abnormal substances such as sugar and albumin, and as a qualitative test for beta-oxybutyric acid, formalin or water in milk, etc. The relation of specific gravity in health to cryoscopy is quite constant, but varies in diseases according to the quality of food and drugs taken, temperature, amount of sugar and salt in the urine, etc. There is a personal equation in making the test which should always be determined by the testing of distilled water under the conditions used in making the test. The cryoscopic index of the blood is quite constant, 0.56 to 0.58 C. Above this figure the blood is hyperosmotic, below this hyposmotic. In the former there is an insufficiency in the respiratory mechanism and secretion of the urine. The latter condition is noted in chlorosis and tuberculosis. While the index of the urine varies largely in health, cryoscopic examinations may be important corroborative tests in medicolegal cases, as in drowning. The salt freezing point of twenty-four-hour urine should not vary more than 1.23 to 1.69. If more than 1.69 we have oligochloruria; if less than 1.23, polychloruria. He suggests the direct relation of the blood index to viscidity of the blood.

56. **Nephritis of Gastrointestinal Origin.**—Favill calls attention to nephritis from absorption or intoxication from the gastrointestinal tract. As for treatment we should enforce rest, starvation, bowel disinfection and cardiac tonics. He believes that excess in eating is largely the cause of the tendency to this condition and reports a number of illustrative cases.

57. **The Early Diagnosis of Tuberculosis.**—Walsh points out the principal data which should guide us in the early diagnosis of phthisis; the higher temperature and pulse, loss of weight, etc. He warns against the use of obesity cures in persons that have had signs of tuberculosis earlier in life. He has seen rapidly developing and fatal tuberculosis follow too rapid reduction in weight under such circumstances. A cough of ten days to two weeks' duration should be considered with suspicion. There is no one symptom that is absolutely certain. A study of the individual case is required, but the points mentioned above give good reason for suspicion, and the environment and surroundings should be carefully studied in connection with them. He condemns the concealment from a patient that he has tuberculosis. He believes it is a bad practice on the part of the physician.

58. **Angioma and Its Treatment.**—Beck finds that one of the valuable methods in the treatment of angioma is subcutaneous ligation prior to incision. This reduces the size of the growth and avoids an extensive scar. Compression, as advised by old authors, is not advisable, nor does he consider the injection of styptics as reliable. The use of electricity in various forms is a valuable method, but the ultimate recourse is excision.

59. **Intestinal Anastomosis.**—Clark and Luther consider the Connell suture the most rapid and perfect method yet devised for end-to-end and lateral anastomosis, though for the closure of simple perforations or lacerations, or for exploratory incisions into the hollow viscera, Halsted's rectangular quilt suture is easy of execution and quite safe and is of decided preference. All mechanical devices for intestinal anastomosis should be discarded in favor of the Connell suture. Neither the suture within the bowel, as shown by the Wiggin-Connell method nor the Lembert suture and its modifications, should have the exclusive preference. Both are of great value in special fields and should be at the command of the surgeon to use as his best judgment dictates.

Cleveland Medical Journal.

May.

66. *Radium, Radioactive Substances and Aluminum, with Experimental Research of the Same. Myron Metzenbaum.

67. *Epidemics of Typhoid Fever in Cleveland. H. E. Henderson.
68. *The Character of the Widal Reaction in the Present Epidemic of Typhoid Fever. L. W. Ladd.
69. The Water Supply of Cleveland, Past, Present and Future. William T. Howard, Jr.
70. The Intercepting Sewer. William J. Carter.

66. **Radium.**—Metzenbaum gives the history of radium and its discovery and also the radio-active properties of thorium and other substances. He thinks that radium rays are destructive to living tissues, and the only hope for their therapeutic use is in their destroying the cancer cells before attacking the healthy tissues of the body. That healthy cells can be destroyed is sufficiently proven. Thorium being a very radio-active substance, may have some value in medicine or surgery, and he thinks it may come to be added to our list of drugs. In conclusion he reports a case of lupus treated by a radium tube of 7,000 activity and two tubes of 40 activity, with excellent results.

67. **Typhoid in Cleveland.**—The occurrence of typhoid in Cleveland during the last thirty years is briefly analyzed by Henderson. Accepting the idea that it is usually a water-borne disease, its history would point to a water supply always more or less defective and subject to attack of acute and severe infection with typhoid poisoning. The moderately high average mortality from typhoid fever, interrupted by short epidemics of greater or less severity, are noted.

68. **The Widal Reaction in Typhoid.**—Ladd has studied the Widal reaction in the present epidemic in Cleveland in some 454 cases at the Lakeside Hospital. The figures show that the Widal reaction was distinctly delayed in its appearance during the past six months; that it was less positive than was the case previously, and there were more anomalous cases than was formerly the rule.

Journal of Nervous and Mental Disease, New York.

May.

71. *A Clinical and Pathologic Contribution to the Study of the Central Localisation of the Sensory Tract. Herman H. Hoppe.
72. Two Tumors of the Brain. (A) Cyst of Right Occipital Lobe; (B) Endothelioma of the Left Frontal Lobe. T. M. T. McKennan.
73. Some Notes on Dispensary Work in Nervous and Mental Diseases. Smith Ely Jelliffe.
74. Report of Two Cases of Meningeal Tumor Treated by Ligature of Their Vessels. Arthur Conklin Brush.
75. The Influence of Fever on the Pains of Locomotor Ataxia. Charles W. Burr.

71. **The Sensory Tract.**—Hoppe discusses the literature and reports cases bearing on theories of sensory localization. He concludes that: 1. Acute softening of the cortex of the area supplied by the middle cerebral artery produces in addition to complete hemiplegia a complete hemianesthesia. 2. Chronic degeneration and atrophy of the lower Rolandic tract due to thrombosis of a branch of the middle cerebral artery was not followed by a permanent loss of sensation of the opposite side of the face and arm. 3. Tumors destroying the cortical and subcortical region of the motor area very frequently have subjective disturbances of sensation such as pain, formication and numbness. Objective disturbances may occur, but are generally slight, and even in cases of severe motor disturbances leading to complete hemiplegia we do not ordinarily find sensory disturbances in proportion to the motor damage. He is inclined to favor the view of von Monakow that general body sensations have bilateral representation and that sensory impressions may reach the cortex by vicarious routes if their paths are destroyed. The chief cortical sensory areas, he thinks, at least for pain and temperature, are located in the anterior portions of the posterior lobe and the tactile and muscle sense in the Rolandic areas. Summing up the facts as regards the thalamo-cortical neuron, acute hemorrhagic destruction of the corona radiata between thalamus and cortex or acute cortical softening such as is due to thrombosis of the middle cerebral artery lead to hemianesthesia. Hence he thinks the physiologic character of the thalamo-cortical neurone as a sensory tract may be accepted. On the other hand, chronic lesions of this region may and often do exist without causing any pronounced disturbances of sensation, and this leaves us but one explanation: Von Monakow's theory of bilateral representation.

Physician and Surgeon, Detroit and Ann Arbor.

March.

76. Dr. George Edward Frothingham. Fleming Carrow.
77. *Resection of the Nasal Septum for Correction of Deflections. Willis S. Anderson.
78. Laboratory Work for the General Practitioner. James R. Arnell.
79. A Rapid Procedure for the Estimation of the Peptic Value of Stomach Fluid by Means of the Mett Method. David Murray Cowie.

77. **Resection of the Nasal Septum.**—Anderson advocates Krieg's operation recently developed by Freer (see THE JOURNAL of March 8, 1902). He describes the method and claims that it has the advantage of being more easily adapted to irregular septa, the after-treatment is shorter and simp'er and there is no necessity of confining the patient to bed. He reports 12 cases in which he performed this operation, 10 men and boys, and 2 women. All were improved and most were entirely relieved of all troublesome symptoms. Two cases were not quite successful, one apparently on account of the narrow space in which he had to work and the other due to a severe trauma which could not have been relieved by any single operation. In his early cases he had 3 perforations, but since becoming more familiar with the method and having the proper instruments, he has not had a single case of this sort. On the whole it appeals to Anderson as the most satisfactory operation for the correction of deflections that we have.

Medical and Surgical Monitor (Indianapolis).

May 15.

80. Address, Graduating Exercises of Central College of Physicians and Surgeons. Charles B. Williams.
81. *Observations Based on 100 Mastoid Operations. John F. Barnhill.
82. Surgery of Bright's Disease. J. C. Sexton.
83. Ulcer of the Stomach. Simon P. Scherer.
84. Marasmus Infantilis. Louis Burckhardt.

81. **Mastoid Operations.**—The experience of Barnhill is here reported as favorable to mastoid operations. His fatalities were only 3 out of 100, and none of these was due to the operation when performed in cases where no intra-cranial complication existed. The deformity left even in extensive operations he considers slight, and the results as regards the cure of the mastoiditis and the discharging ear have been generally good, especially in the acute cases where it was ideal. In chronic cases they were not quite so striking, and he thinks that in such the so-called Schwartze-Stacke operation should be done only after other means of cure have been fairly tried; for he has had many recoveries after the removal of dead ossicles and clearing out of the existing granulations or other diseased tissue in cases that, according to the advice of others, would have been treated by the radical method. Three cases of cerebral complications are reported.

American Practitioner and News, Louisville, Ky.

May 1.

85. Injuries to the Head. A. David Willmoth.
86. Diagnosis and Treatment of Diphtheria. W. F. Boggess.

Medical Herald, St. Joseph, Mo.

May.

87. Fractures at or Near the Joints. Frederick Treves.
88. To Those That Are to Be. L. Clyde Davis.
89. Symptoms and Diagnosis of Syphilis. Charles G. Geiger.
90. Syphilis of the Nervous System. J. R. Reynolds.
91. Etiology of Syphilis. L. J. Dandurant.
92. The Prognosis and Treatment of Syphilis. Jacob Geiger.

Detroit Medical Journal.

May.

93. Puerperal Infection. Edward T. Abrams.
94. Tumors, Cranial and Intracranial. Charles W. Hitchcock.
95. Surgical Treatment of Cranial Tumors. Angus McLean.
96. Is the General Practitioner Fairly Paid? If Not, Why Not? Alvah N. Collins.

Medical Bulletin, Philadelphia.

May.

97. Acute Endocarditis—Typhoid Fever. James Tyson.
98. Diarrhœa. William H. Hodman.
99. Cancer of the Stomach. John V. Shoemaker.

Carolina Medical Journal, Charlotte.

May.

100. Ileocolitis. I. W. Falson.
101. Some Remarks on Digestive Disturbances. John N. Upshur.
102. Summer Diarrhœa in Children. R. H. Mason.
103. Cholera Infantum: Its Treatment and Cure by Obtaining and Maintaining Intestinal Asepsis. W. C. Abbott.

Interstate Medical Journal, St. Louis.

May.

104. Human Embryos, Their Value, Methods of Preserving and Sectioning. A. C. Eycleshymer.
105. The Use of the Wire Nail in Joint Fractures, with Report of Two Cases. Nathaniel Allison and Harold W. Jones.
106. Fixation of the Kidney with Regard for Its Physiologic Excursion. Vilary P. Blair.

Merck's Archives, New York.

May.

107. Acetic Acid in Diseases of the Nose and Throat. Lewis S. Somers.
108. An Index to Diseases, Alphabetically Arranged, with Their Modern Treatment (continued). G. Bjorkman.

Iowa Medical Journal, Des Moines.

May 15.

109. Significance of Abdominal Pain. A. L. Wright.
110. Diagnosis of Urinary Diseases. George W. Jones.
111. The Legal Status of Mental Healers. H. H. Stipp.
112. Report of Obstetric Cases. J. P. Herrick.

Medical Age, Detroit.

May 25.

113. Membranous Croup, with Report of Cases. J. T. Herren.
114. Diagnosis and Treatment of Malpresentations. Frank L. Rose.
115. Therapy of Sodium Chlorid. J. S. Nowlin.

Journal of Comparative Neurology and Psychology, Granville, Ohio.

April.

116. Physiologic Evidence of the Fluidity of the Conducting Substance in the Pedal Nerves of the Slug—Ariolimax Columbianus. O. P. Jenkins and A. J. Carlson.
117. The Nervous Structure in the Palate of the Frog; the Peripheral Networks and the Nature of Their Cells and Fibers. C. W. Prentiss.
118. Beginnings of Social Reaction in Man and Lower Animals. C. L. Herrick.
119. Inhibition and Reinforcement of Reaction in the Frog. Rana Clamitans. Robert M. Yerkes.
120. Behavior and Reaction of Limulus in Early Stages of Its Development. Raymond Pearl.

Bulletin of the Kentucky State Medical Association, Louisville.

April.

121. Breeding of the Yellow Fever Mosquito at Louisville. T. D. Berry.
122. Conservatism as a Factor in the Character of a Doctor. D. M. Griffiths.

May.

123. Professional Union or a United Profession. J. G. Carpenter.
124. Belladonna Poisoning by a Plaster, with Report of a Case. Hugh D. Hodman.
125. Necessities For, and Incentives To, Progress in Medicine. J. M. Peck.
126. Four Cases of Streptococcus Infection in One Family. L. B. Cook.

Indiana Medical Journal, Indianapolis.

May.

127. Cardiovascular and Blood States as Factors in Nervous and Mental Disease. F. W. Langdon.
128. Postgraduate Work in New York City. Nelson D. Brayton.

Alabama Medical Journal, Birmingham.

May.

129. Ethical Aspect of Medical Progress. Thomas D. Parke.
130. Intratracheal Injections in the Treatment of Pulmonary Tuberculosis. W. W. Mangum.
131. Some Remarks on Pulmonary Tuberculosis. Edgar Allen Jones.

St. Louis Courier of Medicine.

May.

132. Leukemia. J. M. Buchanan.
133. Ligation of the Common Carotid Artery. J. M. Pfeiffenberger.
134. Acute Osteomyelitis of the Femur. C. G. Kirchner.
135. Recent Therapy in Epilepsy. Given Campbell.

Memphis Medical Monthly.

May.

136. Practical Points in Roentgen Ray Technic. William Krauss.
137. First Aid to the Injured. E. M. Holder.
138. Tetanus; Report of a Case; Recovery. George R. Livermore.
139. Deviations of the Nasal Septum. S. L. Edwards.
140. Diphtheria, with Résumé of Cases Treated with Antitoxin. J. E. Witherington.
141. Foreign Body in a Child's Vagina. Alfred Moore.

Atlanta Journal-Record of Medicine.

May.

142. Notes on a Trip to New York, Philadelphia and Richmond. James McFaddin Gaston.
143. Headache. Charles E. Boynton.
144. Pneumonia and Its Treatment. Henry B. Black.
145. Chronic Catarrh of the Stomach. J. N. LeConte.
146. Displacements. S. T. Barnett.

Colorado Medicine, Denver.

May.

147. Tuberculin Treatment of Pulmonary Tuberculosis. James Rae Arneill.

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148. Case of Hysterical Hyperpyrexia and Hemoptysis. Bernard Oettinger.
149. Case of Schoenlein's Disease, with Some Unusual Features. C. B. Van Zant.
150. Medical Education in Colorado. S. G. Bonney.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

May 21.

1 *The Infective Nature of Rheumatic Fever. F. J. Poynton.
2 *Abdominal Pain in Acute Rheumatism. S. Vere Pearson.
3 *Bacteriology of So-called "Sterilised Milk," with Special Reference to the Municipal Supply of Milk for the Feeding of Infants. Wm. Robertson and Wm. Muir.
4 "Gouttes de lait et Consultations de Nourrissons." G. Variot.
5 *The Occurrence of Primary Tuberculous Infection of Intestinal Tract in Children; Result of 5,142 Consecutive Necropsies. Wm. Hunter.
6 *Intubation in Laryngeal Diphtheria. John Biernacki and J. C. Muir.
7 *Suggestion for the Treatment of Puerperal Convulsions by Spinal Subarachnoid Puncture. T. Arthur Helme.

1. **Rheumatism.**—Poynton reports a fatal case with postmortem and bacteriologic findings. The diplococcus was cultivated in tubes inoculated from valves, spleen and kidneys. The cultures from the lung were not pure, but the diplococcus was present among other micro-organisms, while those of the pericardial fluid and blood gave negative results. This last he says emphasizes a point to which with Dr. Paine he has already called attention. It is that these micro-organisms, when they occur in the body, grow best in local lesions, and though they are often present in the blood, they do not thrive in it. They are not easily found in recent exudates, for they lie in the synovial tissue and not in the synovial fluid of the joint; in the pericardium itself, and not in the pericardial exudations. Therefore, in slight attacks of rheumatic fever, neither examination of the blood nor synovial exudation will often result in success in finding the germ. If the infective agent was always present it would indicate a much more terrible disease than actually exists. Inoculation experiments on monkeys and rabbits were successful. He discourses on the practical application of the infective theory of rheumatism, pointing out the stimulus that it gives to a study of the action of bacterial poisoning in the pathogeny of gout, and also the identity in structure of the cardinal lesions of rheumatic fever, which now rests on good evidence. Endocarditis, pericarditis, arthritis, pleurisy and nodule formation are lesions of the same type, allowance being made for their anatomic situation. He thinks the view also helps us as regards treatment. Without saying anything in regard to serumtherapy, which is not past the critical point of its development, we can now see the phase in rheumatic fever when infection has the upper hand and where it is being vanquished and the healing processes have begun. Thus we can bring into action the assistance of hydropathic measures, radiant heat, electricity and other methods to aid in the recovery. He believes it is time to study up rheumatic fever, the influence of climate, overcrowding, contagion, etc.

2. **Abdominal Pain in Acute Rheumatism.**—Pearson calls attention to a symptom which occurs in certain cases of children of a sort of abdominal pain in the upper half of the abdomen, starting from a point a little below the costal margin, close to the middle clavicular line on either side and running from there either toward the umbilicus or straight across. The etiology is obscure. The treatment is that of the general disorder. He reports several typical cases.

3. **Sterilised Milk.**—The dangers of trusting too much to sterilised milk are pointed out by Robertson and Muir, who divide bacteria in milk into three classes: 1. The non-spore-bearing, including cocci, lactic acid, coli and proteus groups, easily killed by exposure to 100 C., or heating for a short time at a temperature of a little over 90 C. Pasteurizing for half an hour also kills these bacteria. 2. The butyric acid bacilli, the anaërobic spore-bearing forms, killed by exposure for one to one and one-half hours at a temperature of 100 C. To this group belongs Klein's *Bacillus enteritidis sporogenes*. 3. The bacillus subtilis group. There are aërobic, spore-bearing bacilli, decomposing milk with a faintly acid or unchanged condition, causing coagulation of the casein and subsequent liquefaction of the coagulum. Flügge attributes the summer diarrhœa of children largely to these "peptonizing bacilli" and has isolated twelve distinct species from samples of market milk. He concludes that most of the so-called sterilized milk on the market is unreliable and likely to cause harm. The authors think if Flügge's view is right, the reproach against partially sterilized milk is serious, but most practicing physicians will be of the opinion that Group 1 is the real culprit in most cases, as boiling the milk seems to relieve the intestinal disorders of children. They have examined the specimens in milk supplied to infants from the infants' milk depot of the Leith corporation and conclude that the designation "sterilised milk" is wrong and misleading, and would suggest substitution of the name "milk prepared for infants." Every customer should be carefully instructed as to the necessity of keeping the milk as cool as possible, especially in summer. Faith in steam sterilization should not be too implicit. In hot weather each daily supply should be sold as it is prepared. As an additional precaution, all bottles after being taken from the sterilizer should be placed in warm water gradually cooled as the placing of warm bottles in cold water would lead to their breaking. They insist on the importance of cleanliness on the part of the cow keeper as an important adjunct to the general movement for wholesome milk.

5. **Intestinal Tuberculosis.**—From Hunter's researches in Hong Kong, where, out of 5,142 consecutive necropsies, only 13 cases of intestinal tuberculosis were found, and 8 of these considered as a secondary infection, being derived from tubercle foci in other parts of the body, leaving only 5 to be regarded as instances of primary intestinal tuberculosis. His conclusions are that primary tuberculosis of the intestine is rare under 5 years of age, and that tuberculosis of the mesenteric glands is also rare. These results, derived from a native population where tuberculosis is rife in all its forms and conditions exceptionally favorable for its dissemination, point to the alimentary canal as a rare avenue through which infection is conveyed in childhood.

6. **Intubation.**—Biernacki and Muir from their experience would use intubation as a treatment in laryngeal diphtheria as against tracheotomy in the absence of clinical contraindications. Among these they mention severe involvement of the fauces and nasal passages, though even in severe cases intubation is not often contraindicated. With palpable edema of the upper part of the larynx, ulceration is a danger in some cases. The presence of membrane low down in the trachea as a contraindication is in doubt. In two cases intubation gave relief, although subsequently casts showing the bifurcation of the trachea were coughed up. The last condition noted is a moribund condition referable to obstruction, and there is a possibility that the temporarily increased asphyxiation involved in intubation is inadmissible in such cases. An extensive bronchopneumonia as a contraindication is considered, and they doubt whether intubation has really an effect on it. If there is much tenacious sputum, intubation may be rendered ineffectual by constant blocking of the tube, but such a contingency can not well be foreseen. If there should be a severe blocking of the tube and intubation only partially relieve it, tracheotomy would have to be performed; otherwise time should be allowed for the child to settle down. They do not believe in retention of the tube under ordinary conditions past the fourth day. It should then be taken out and kept out, if possible.

7. **Puerperal Convulsions.**—Helme advocates theoretically the use of spinal subarachnoid puncture as a relief for pressure symptoms so obvious in puerperal convulsions, he considering that increased intracranial pressure is largely the cause of the condition.

The Lancet, London.

May 21.

8 *Some Disorders of the Blood and Blood-forming Organs in Early Life. Robert Hutchison.
9 *Acute Infective Gangrenous Processes (Necroses) of the Alimentary Tract. Edred M. Corner.

10 A Comparison of the Animal Reactions of the Trypanosomes of Uganda and Congo Free State Sleeping Sickness with Those of Trypanosoma Gambiense. (Dutton.) H. Wolferstan Thomas and Stanley F. Linton.
11 *A Chinese Remedy for Hydrophobia. Vidal G. Thorpe.
12 Albina, Dirt and Disease. N. Bishop Harman.
13 *The Relation of the Pancreas to Diabetes and the Question of the Transplantation of That Gland as a Remedy for the Disease. James W. Allan.
14 A Case of Dermoid Cyst of the Mesentery. J. Basil Hall.
15 *Neuroretinitis in Chlorosis. J. Jameson Evans.
16 Fasting in Therapeutics. John Haddon.

8. **Blood Disorders.**—Hutchison's second lecture discusses the splenic anemia of infancy and its relation with that of adults. He points out the curability of the former, and discusses its etiology, pathology and causation. He thinks that it is true that both forms of splenic anemia may occur in children, and reports a case which seems to indicate this. Still, he considers the two diseases ordinarily quite distinct. The leukemia of childhood in its different forms is discussed, as also the mixed forms. He thinks that the tendency is in favor of attaching more importance to the type of cell found in the blood and less to its special seat of origin, and ventures to prophesy that in future the leukemias will be classed on the former basis, instead of as hitherto on the latter; that we will speak of myelocytic, lymphocytic and mixed-cell leukemias, rather than of myelogenous or lymphatic. Only in such a way will the present confusion in classification be reduced to order.

9. **Infective Gangrenous Necrosis of the Alimentary Tract.**—Corner, from an examination of the records of cases of obstruction of the mesenteric vessels, deduces the following tables:

CLINICAL TABLE.

1. It is most common in men past middle life. 2. It is most common secondary to valvular disease of the heart, especially mitral disease. 3. The onset is generally sudden, with symptoms of peritonism. 4. In one class the picture is one of intestinal obstruction or peritonitis, due to appendicitis or the perforation of a gastric ulcer. 5. There is also another class in which the blood is passed per rectum, and which signifies infarction of the bowel. 6. Subacute and chronic cases are seen, as well as the most acute. 7. In some cases it is most probably spontaneously recoverable from, especially if only a small area of the bowel is rendered bloodless.

PATHOLOGIC TABLE.

1. For a constant situation of the embolus in the superior mesenteric artery, as in the main trunk, all varieties of clinical cases have been reported, from the most acute and fulminating to cases like Professor Chiene's that recovered apparently without obvious symptoms. 2. With a precisely similar lesion some subjects die in thirty hours, and some not for from twelve to twenty days. 3. Gangrene of the gut has been noticed to occur within thirty hours, and sometimes not after twenty-two days. 4. A collateral circulation can be formed in slowly developing cases of visceral vascular obstruction—e. g., Professor Chiene's case. And even in more acute instances an attempt at a collateral circulation is made. 5. The superior mesenteric artery is almost invariably picked out for the site of the embolus in fatal cases, possibly because it will always cause symptoms and almost always death, which need not occur with involvement of the inferior mesenteric and its branches or those of the celiac axis. 6. The explanation of the individual variations, clinical and pathologic, seems to depend on the pathogenicity of the bacteria present in the gut as to the severity, rapidity or other characters of the cases. On the bacteriology of this affection there is no work done.

11. **Hydrophobia.**—Thorpe finds that the Chinese have a remedy for hydrophobia, consisting in the powdered nut of a Strychnos, probably Strychnos nux vomica. It is said to cause the patient to fall into a sleep in which he sweats profusely and awakes cured. Assuming the ordinary proportion of strychnia in the nut, it would be from 1/33 to 1/13 of a grain in each powder. He finds no reference to this as a remedy for hydrophobia, and suggests that the Chinese have applied the principle of *similia similibus* from some certain resemblance of symptoms.

13. **Diabetes.**—Allan advocates the use of the organic treatment by the transplantation of the pancreas into the patient under the following conditions: When, after a full and honest explanation, the patient requests it, and it is ascertained that the patient is not suffering from acetonuria at the time, and that the sheep shall be killed close to the place of operation and its pancreas directly conveyed to the body of the patient.

15. **Neuroretinitis in Chlorosis.**—Evans notes the occurrence of fundus changes in chlorosis and their neglect nevertheless by ophthalmologists. He insists on the importance of early diagnosis of neuroretinitis in these cases to prevent permanent damage to the eye. No satisfactory theory as to the cause of neuritis and hemorrhages has been propounded as yet. The treatment is the ordinary treatment for chlorosis by iron, with or without arsenic, and due attention to the intestinal tract. Five cases are reported by him.

Australasian Medical Gazette, Sydney.

April 20.

17 Address, New South Wales Branch of the British Medical Association. A. J. Brady.
18 A Plea for Painted Railing and Painted Walls of Rooms as the Source of Lead Poisoning Among Queensland Children. J. Lockhart Gibson.
19 *A Contribution to the Study of Neoplasms. Arthur Styles Vallack.
20 The Blood in Appendicitis. Sydney Jamieson.
21 Unusual Accident to a Fibroid Tumor of Uterus Complicating Pregnancy. J. A. G. Hamilton.
22 Treatment of a Case of Aneurism of the Transverse Aorta. Louis Henry.

19. **Neoplasms.**—Vallack opposes the parasitic theory of neoplasms, and suggests that the tumor formation is the perverted relic of a lost ancestral function, namely, a sexual reproduction, supporting his view by the occurrence of neoplasms most frequently in the young, or in the aged, when the sexual powers are either undeveloped or are on the decline, their heredity, the effects of irritation as producing proliferation with abnormal rapidity on cell reproduction, and the fact that certain localities seem to be particularly prone to the formation of these growths. He does not refer to the recent work by English authors showing the resemblance in the mitoses of cancer cells to those of the reproductive cells, in support of his argument.

Revue de Chirurgie, Paris.

Last indexed page 1221.

23 (XXIV, No. 5.) *De la valeur clinique de la courbe leucocytaire dans les maladies chirurgicales et en particulier dans la appendicite. Etat de la question. C. Julliard (Geneva).
24 *Rectoplicature antérieure et myorrhaphie des levatores ani dans le traitement du prolapsus rectal. P. Duval and C. Lenormant.

23. **Leucocyte Curve in Surgical Affections.**—Julliard comments on the fact that no physician relies on occasional, casual thermometer readings in his estimation of the temperature in disease. He insists on the general curve of the temperature chart and bases his diagnosis on the characteristics of the curve as a whole. No one, however, applies this rule to the blood count. An occasional numbering of the leucocytes is supposed to be all that is necessary for the diagnosis of surgical affections, whereas in reality it is the general curve of the leucocytosis which is decisive. Those who doubt its clinical value are those who have been content with an occasional leucocyte count. It should be observed in connection with the temperature and the pain, these three forming the "symptomatic trilogy" whose elements should never be separated. The leucocytosis frequently precedes the fever, which gives it unusual diagnostic importance. In suppurative appendicitis the number of leucocytes may increase to 25,000. This figure is the lower limit of suppuration. The figure must remain at this point or above for several days at least to affirm the positive presence of pus. The number of leucocytes at the onset is no criterion. The curve alone, as the affection progresses, is of importance for the diagnosis. The leucocytosis increases if the abscess has a tendency to spread, and decreases as its virulence becomes attenuated or it becomes encapsulated. The leucocytosis abruptly subsides in case of evacuation of the abscess, whether by surgical intervention or by perforation into the intestine or bladder. If the leucocytosis persists after surgical evacuation of the abscess there must be some second focus or metastasis or some complication of a different kind, such as pneumonia. When the abscess perforates into the abdominal cavity the leucocytosis subsides at first, but rises again as peritonitis develops. The absolute number of the leucocytes is of more diagnostic import than the proportion of the different varieties. The article is continued.

24. **Surgical Treatment of Rectal Prolapse.**—The three-fold indications in treatment of prolapse of the rectum are the reconstruction of the perineum and the anal canal, reduction of

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the size of the ampulla and suppression of Douglas' pouch when it is abnormally large and especially when there is hernia into it. The technic which Duval and Lenormant use and recommend includes intervention both behind and in front of the rectum. The rectum is first suspended from the sacro-sciatic ligaments and then the anterior wall of the rectum is taken up in vertical and horizontal folds, the suturing threads emerging through the levatores ani. Two cases thus treated are described and six illustrations show the various steps of the operation. The results, both immediate and remote, have been extremely satisfactory.

Archiv f. klinische Chirurgie (Langenbeck's), Berlin.

Last indexed page 1385.

26 (LXXII, No. 4.) *Die erhöhte Resistenz des Peritoneums bei der akuten Perityphlitis. L. Mesenburien.

36 Bericht über 370 operativ behandelte Fälle von Epityphlitis. Beisinger (Mainz).

27 *Ueber intraperitoneale Ruptur der Harnblase (of bladder). L. B. Seldowitsch (St. Petersburg).

28 *Ueber Trocken-Sterilisation mittels Formaldehyd. A. Schlesinger.

29 *Danger of Infecting Wounds by Speaking During Operations. Mendes de Leon (Amsterdam).—Gefahren der Wundinfektion durch das Sprechen bei Operationen.

30 Zur Kasuistik der Sakral-Tumoren. Engelmann.

31 Zur Lehre von der Nekrose des Fett-Gewebes und des Pankreas. O. Busse.

32 Das zentrale Cyst-Adenom der Kiefer (of jaw). W. Placus.

33 X-Rays in Osteoma of Frontal Sinus. O. Parthen.—Die Bedeutung der Röntgen-Strahlen für die Diagnose und Operation der Stirnhöhlenosteome.

34 *Further Contribution to Surgical Treatment of Undescended Testicle. Arthur Dean Bevan (Chicago).—Zur chirurgischen Behandlung des nicht herabgestiegenen Hodens.

35 Explanation of Effects of Exploding Bullets. Hildebrandt.—Zur Aufklärung der Bewegungsvorgänge bei Explosionsschüssen.

25. **Enhanced Resisting Power of Peritoneum in Appendicitis.**—The abscess formation is preceded by diffusion of toxins from the at first diffusively inflamed appendix. These diffused toxins induce the production of antitoxins, which are thus on hand, ready to cope with bacterial invasion after perforation of the appendix, and they allow the peritoneum to be opened up with comparative impunity at this stage. This explains the rapid recovery from the peritonitis as soon as the appendix is removed, if the operation is done in time. The diffuse serous effusion, which is the first reaction to the diffusion of the toxins, is an indication of their presence. Its amount, likewise, is an indication of their virulence. (See abstract of Mouzkowies' first communication on this subject of the diagnostic importance of the serous effusion in appendicitis, page 686.)

27. **Intraperitoneal Rupture of the Bladder.**—An important sign of this occurrence is the finding of the bladder completely empty, while a large amount of urine pours through the catheter when the latter has found its way through a large rupture. When the rupture is extraperitoneal there is usually 50 to 100 c.c. or more of urine left in the bladder. Seldowitsch describes a case and reviews those that have been published in Russia and elsewhere, a total of 30 cases of recovery after intraperitoneal rupture of the bladder. The proportion of recoveries has been small to date, but the prognosis is growing better. An incomplete should be sutured like a complete rupture. Fatal peritonitis is frequently due to infection during catheterization. In the personal case reported he left a catheter continuously in the bladder for two weeks, changing it every day and carefully cleansing the outer orifice of the urethra each time before inserting it. The patient was a woman of 27 and an interval of three days elapsed before the laparotomy. The urine had been drawn three times with the catheter in the interim. Very little urine could be found on two occasions, but 1,600 c.c. came the last time. The rupture was 6 to 7 cm. long and was sutured in two tiers. Recovery was rapid and complete.

28. **Formaldehyd Dry Sterilization.**—Tests of the Perey Simundt steriliser at von Bergmann's clinic showed that it is an excellent means of keeping sharp instruments and catheters sterile, but it is not so practicable for sterilization of dressings, etc.

29. **Infection of Wounds from Speaking During Operations.**—Mendes de Leon arranged a box with agar plates on the bottom and spoke over it the words usually said during the course of a laparotomy, a total of 60 to 100 or 200 words—all the conditions approximating those of a major operation. He estimates that there were at least 4,375 micro-organisms in every droplet of saliva. Four kinds of bacteria developed on the plates, streptococci, diplococci, staphylococci and sarcinæ. Some of the streptococci proved very virulent, more so than streptococci in the saliva in the mouth. He thinks that more attention should be paid to the danger of infection from this source, and advocates the use of a mouth mask he has invented to obviate it. He gives details of experimental inoculation of 61 animals with the agar from plates over which the same words were spoken as had been used in some preceding operations (Dutch and German). His mouth mask is made of fine wire netting in the shape of a roomy cap or box, fitting over the mouth and part of the cheeks. There is a layer of cotton between the top of the box and its perforated cover. The mask is very light and is held in position by a spring around the ears like spectacles.

34. **Surgical Treatment of Undescended Testicle.**—Bevan describes with numerous illustrations his mode of treatment as already presented in THE JOURNAL.

Archiv f. pathologische Anatomie, etc. (Virchow's), Berlin.

Last indexed page 1386.

36 (CLXXVI, No. 1.) Ueber den physiologischen Jod-Gehalt der Zelle. J. Justus.

37 Certain Conditions of Coagulation of Blood. Leo Loeb (Montreal).—Versuche über einige Bedingungen der Blutgerinnung, insbes. über die Spezifizität der in den Geweben vorhandenen Coaguline.

38 Clinical Significance of Most Important Morphologic Changes in Red Corpuscles. O. Boelike.—Ueber die klin. Bedeutung der wichtigsten morph. Veränderungen an den roten Blutkörperchen.

39 Zur Lehre von der symmetrischen Erkrankung der Tränen- und Mundspeicheldrüse (of lachrymal and salivary glands). Wallenfang.

40 Zur pathologie des chromaffinen Systems. J. Weisel (Vienna).

41 Zur Frage der anatomischen Beziehung zwischen Akromegalie und Hypophysis-Tumor. G. Cagnetto (Padua).

42 Ueber Neubildung von Elastin in Geschwülsten (tumors). B. Fischer.

43 Eine Geschwulst der Pleura, von aberrierendem Lungen-Gewebe ausgegangen. N. Munn (Copenhagen).

Archiv f. Verdauungs-Krankheiten, Berlin.

Last indexed page 883.

44 (X, No. 2.) *Ueber die Sondierung und Radiographie des Dickdarms (of large intestine). Schüle (Freiburg).

45 *Ueber Aetiologie und Schluckmechanismus bei Idiopathischer Speiseröhrenerweiterung (dilatation of œsophagus). G. Pietrkowski (Posen).

46 *Einige Beobachtungen über Cholelithiasis. K. Grube.

47 *Beitrag zur Bestimmung der Magengrenzen mittelst Aufblähung (inflation to outline stomach). A. K. Sievert (Kiev).

44. **Sounding and Radiography of the Large Intestine.**—Schüle has been testing various sounds, including Kuhn's flexible spiral sounds and also the Kassel soft tubes with flexible metal guide, terminating in a button 5.5 to 8 cm. in circumference, thus obviating all danger of perforating the intestinal wall. He gives radiograms of the findings. His conclusion is that no convincing proof has been obtained to date that a sound has been successfully passed into the descending colon, to say nothing of the transverse portion. The innumerable folds, windings and swellings of the intestine render it impossible to determine whether an obstacle to the progress of the sound is of a natural or pathologic nature. On the other hand, the direct visual inspection of the rectum and sigmoid flexure by the J. Schreiber and H. Strauss technic is perfectly reliable. Schüle found that "high injections" were practicable, the best vehicle being oil. An injection in the knee-elbow position of 300 to 400 c.c. of oil with 125 gm. bismuth subnitrate, followed by radiography, showed that the oil had penetrated to the ileo-cecal valve. He gives some instructive radiograms thus obtained. In 2 of the patients there was pronounced enteroptosis, the transverse colon in one hanging suspended like a garland from the two points of attachment at each end, the center reaching far below the upper plane of the pelvis. He gives a radiogram of a normal child for comparison. On account of the small amount of the oil injected and the fact that the subject was in the knee-elbow position at the time, the injection could not have been responsible for the sinking of the intestine. The radiograms show perfectly the topography of the colon for its entire extent. They also prove that the ileo-

cecal valve is always continent. Tests on the cadaver showed that extreme pressure—beyond what would be possible in the living subject—is necessary to force it open.

45. **Etiology of Idiopathic Dilatation of Esophagus.**—The external causes of this condition may be manifold, such as "catching cold," inflammation of the mucosa from irritating foods, emotional disturbances, traumatism and infectious diseases. The internal cause is single and consists in disturbance in the finely balanced innervation equilibrium between the cardia and the lower third of the esophagus. This may be due to some primary exaggeration of the innervation of the cardia in a cardiospasm such as is liable to occur in emotions, chilling, trauma and inflammation. This enhanced nerve action in the cardia entails diminished reflex excitability in the lower third of the esophagus, and the muscle responds to the increased task by genuine hypertrophy. Another cause is the reverse, a primary weakness of the esophagus musculature, such as may be induced by infectious diseases or by traction from overexertion. This entails, to restore the balance, an increased tonicity in the cardia, which progressively increases by secondary irritations, as from clinging fragments of food or inflammation of the mucosa, until it becomes actual spasm and thus affords conditions for dilatation to occur. Radical cure seems to be possible only by operative intervention, stretching and functionally excluding the cardia, as Mikulicz has repeatedly done. Four cases are described in detail in which the clinical course of the affection could be clearly distinguished and the various phases followed with the radiography. In one infection, trauma and lifting heavy weights appeared in the anamnesis. In another the drinking of large quantities of vinegar. In a third case the spasm followed exposure to cold air, and was always accompanied by dyspnea. Relief was obtained only by eating something; as the patient remarked, "his stomach opened and let out the air," after which he felt better. In the fourth case the disturbances followed a severe infectious sore throat. None of these patients was treated surgically. All were sufficiently improved by a strengthening, fluid diet, effervescent powders (Brausepulver), bromids and validol or Ems water and hydrochloric acid in the last case. The diagnosis was based in large measure on the abnormal swallowing sounds, especially the intervals between the phases of swallowing the ingested substances.

46. **Observations on Cholelithiasis.**—Grube practices at Neuenahr and has seen 435 cases of cholelithiasis in the last eleven years. The diagnosis was confirmed by the passage of stones in every instance. His patients were seldom under 20 or over 70, the age being generally between 30 and 60. More than 77 per cent. were women, and about 86.9 per cent. had borne children. In 37 cases the first colic was noticed within a month of a childbirth. Chronic constipation was the rule in 31.5 per cent. of the 98 men and 53.4 per cent. of the 337 women. He believes that cholelithiasis is regarded as a stomach or other affection far more frequently than that the latter is mistaken for cholelithiasis. A zone of tenderness over the rear aspect of the liver is an aid in differentiating. It extends from the two lower thoracic vertebræ to the first lumbar, and from about 2 cm. to the right of the spine to the rear axillary line. The tenderness is best elicited with faradism, and the symmetrical zone should be tested likewise. Hyperacidity is common, and superposed on the symptoms of cholelithiasis aids in its differentiation. Subjects presenting symptoms of hyperacidity are exceptionally liable to show symptoms of cholelithiasis later.

47. **Outlining Stomach by Inflation.**—Sievert proclaims that inflation with small amounts of gas is an extremely convenient and reliable mode of determining its outlines. When large amounts are used the findings are apt to be misleading.

Beiträge z. Geb. und Gynäkologie (Hegar's), Leipsic.

Last indexed XLI, page 358.

48 (VIII, No. 2.) Teratoma Cause of Hydrocephalus. J. P. L. Huiser.—Teratom in der Schädelhöhle als Ursache eines hochgradigen Hydrocephalus.

49 Zur Kasuistik der Placentar-Tumoren. A. Labhardt (Basle).

50 Fall von Endotheliom ovarii (Rhabdomyosarkom) mit Metastasen in Lymphdrüsen und Uterus. L. Pederlin.

51 Cauliflower Tumors of Vulva. H. Hellendall.—Ueber die Blumenkohlähnlichen Tumoren der Vulva.

52 *Advisability of Bathing Parturients. H. Schumacher.—Zur Frage der Zweckmässigkeit des Bades Gebärender.

53 *Untersuchungen über Metastasenbildung in den Iliakalen Lymph Drüsen bei Carcinoma uteri. Manteuffel.

54 Gravidität in einem Uterus-Divertikel. G. Schickele (Strassburg).

55 *Bakteriologische und experimentelle Untersuchungen über Cystitis nach gynäkologischen Operationen. K. Baisch (Tübingen).

52. **Advisability of Bathing Parturients.**—Schumacher has made extensive bacteriologic studies of this question and thinks that we have no reason to discard the bath altogether. Germs may sometimes find their way into the vagina from the bath water, but this is very rare and is usually dependent on defective healing of lacerations of the perineum. The practice of washing off the external parts has no advantages over the full bath.

53. **Metastasis in Iliac Lymphatics in Cancer of Uterus.**—Manteuffel is convinced that the aim should be to extirpate the glands as thoroughly as possible. Glandular recurrences are of the greatest importance for the recurrence of malignant growth, and extirpation of the glands should be the systematic procedure. At least half of all recurrences after vaginal total extirpation are due to metastasis in the lymph glands.

55. **Prevention of Post-Operative Cystitis.**—Baisch believes that a post-operative cystitis is necessarily due to infection from the catheter. There is no reason for assuming infection from the intestines. The germs found are almost invariably streptococci or staphylococci; coli infection is generally secondary. He advises as a prophylactic measure to inject 20 c.c. of a 2 per cent. boricated glycerin into the full bladder, the evening of the operation in case of post-operative ischuria. The catheter is not used before the injection. As a rule, within five minutes after the injection of the glycerin the bladder is spontaneously emptied. Urination once established in this way continues normally thereafter. He seldom has found a second injection necessary. In case micturition is not induced within a reasonable interval he draws the urine with the catheter, but this has been needed in only the most exceptional cases. THE JOURNAL has already referred to Baisch's announcements in this line, page 1192. His later experience has only rendered him more emphatic.

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Beiträge zur klin. Chirurgie, Tübingen.

56 (XLI, No. 3.) *Surgery of the Stomach. D. Maragliano.—Klinische und path.-anatomische Erfahrungen aus dem Gebiete der Magenchirurgie. (Augusta Hospital, Berlin, 1900-1903.)

57 Zur Kasuistik der Myome des Dünndarms (small intestines). V. Liebstein.

58 *Foreign Bodies in Esophagus. Ibid.—Fremdkörper der Speiseröhre und ihre operative Entfernung.

59 *Zur Kenntnis der akuten infektiösen Osteomyelitis und ihrer Folgeerscheinungen (consequences). Trendel.

60 Ueber aktinomykotische fibrinöse Bronchitis, ein neues Symptom der Lungen-Aktinomykose. Plocht.

61 Growth of Cancer of Stomach. Pförringer.—Beitrag zum Wachsthum des Magen-Carcinoms.

62 Eine merkwürdige, durch Resektion gehobene Funktions-Störung des Unterkiefergelenkes (of articulation of lower jaw). R. Werner.

63 Luxatio intrapelvica durch das Foramen ovale. Ibid.

64 *Zur Pathologie und Therapie des Darmverschlusses (ileus). W. Braun.

56. **Surgery of the Stomach.**—From observation of 79 various operations on the stomach Maragliano deduces several points to be borne in mind. It is of such importance to remove all the morbid tissue in resection of the stomach that it is the practice at the clinic to make a perpendicular incision in the resected portion and if the submucosa at the cut surface shows anything abnormal the resection is carried farther up. When systematic internal treatment of an ulcer fails surgical intervention is indicated. Thirteen out of the 14 ulcer patients recovered after an operation. He prefers Kocher's gastroduodenost. lat. for the purpose, although he regards as the ideal a combination of gastroenterostomy with jejunostomy. This reduces the hypersecretion and hyperacidity, while the healing of the ulcer is promoted by the resting of the stomach musculature. In 2 cases of hour-glass stomach one was cured by resection and suture, the other by gastroenterostomy. There was no mortality in the gastroenterostomies performed for benign affections, but 48 per cent. mortality in the cancer cases.

58. **Foreign Bodies in Esophagus.**—The 3 cases described were treated by esophagotomy and the findings demonstrated the great dangers to which the subjects are exposed in such cases without prompt operative removal of the foreign body.

59. **Acute Infectious Osteomyelitis.**—Trendel completes the statistics previously published from von Bruns' clinic, classifying the material according to sex, age, occupation, etiology, localization, etc. The total is 1,110 affections of long bones and 169 of others. He also gives the direct and remote results.

64. **Ileus.**—Braun denounces the use of opiates and lavage of the stomach, as the relief afforded masks the symptoms. The results of surgical intervention depend on accurate diagnosis. All cases of ileus, due to mechanical obstruction or to organic stenosis, should be operated on at once, as there is little chance of spontaneous retrogression. Surgical intervention alone is not able to cure the patient. It must be supplemented by medical measures directed against the dangerous disturbances in the nervous system, circulation and intestinal function, which are liable to be all seriously compromised in cases of ileus. These medical measures need further enlarging and perfecting. Our present equipment is rather meager, he thinks.

Berliner klinische Wochenschrift.

65 (XLI, No. 18.) *Facial Anomalies Which Affect Growth of Extremities. V. Babes (Bukharest).—Ueber Gesichtsanomalie welchen eine Umwandlung der Extremitaten (Akromotagenese) zur Folge haben.

66 *Traces of Blood in Feces. G. Joachim.—Ueber die Bedeutung des Nachweises von Blutspuren in den Fäces.

67 *Heat Rays in Phototherapy. W. Scholtz (Königsberg).—Ueber die Bedeutung der Wärmestrahlen bei der Behandlung mit concentrirtem Licht nach Finsen.

68 *Puncture in Pericarditis. A. Doebert.—Ueber Entstehung des Herzbeutels und Function desselben.

69 *Ueber percutane Camphor-Anwendung, speciell bei Lungen-Tuberkulose. W. Koch.

70 Radium Holder. M. Einhorn (New York).—Radium-Behälter für den Magen, Oesophagus und Rectum.

65. **Facial Anomalies which Affect Growth of Extremities.**—Babes presents arguments to prove that there is a center which presides over the development of the limbs. Any displacement or deformity in this center is liable to entail abnormal growth of the limbs. He means especially the tendency to a missing toe or finger or an excessive number, or the blending of two fingers or toes into one, or the excessive development of one. These three classes may be combined in various groups, but they are always symmetrical. He calls this tendency to symmetrical deformities "acromotagenesis" and places the center for it in the anterior base of the skull, in the upper part of the face. In a large number of monsters he has found these facial anomalies very pronounced, as he describes, when the acromotagenesis was particularly striking.

66. **Interpretation of Findings of Blood Traces in Feces.**—Joachim's research was undertaken at Königsberg and it has confirmed the announcements of Boas and others in regard to the differential value of "occult" blood findings in the feces. In only 1 out of 18 cases of cancer of the stomach were the findings negative. In 83 per cent. of 23 cases of ulcer of the stomach the findings were likewise positive at some times, but not at others, thus differentiating the ulcers from the more constant findings in case of cancer. Ingestion of raw or rare meat is liable to prove a source of error, and also the fact that blood is apt to be found in the feces for several days after a single copious hemorrhage. In 2 out of 6 cases of typhoid the finding of blood in the stools proved to be a forerunner of a severe hemorrhage a day or so later. Traces of blood were also found in the feces in case of uncompensated valvular heart defects, but they vanished so soon as the congestion subsided. Blood was found in a case of catarrhal icterus, but never in cholelithiasis except once the day following an examination of the stomach. The guaiac test was also positive in case of secondary cancer of the liver and in one instance of cancer in the cystic duct. The findings were negative in a case of cancer of the pancreas, but were positive in a hemorrhagic pancreatitis. As many as 450 tests were made to determine the amount of blood ingested which would give positive response to the parallel guaiac and aloin tests. Even as little as 3 gm. of blood gave a faint response. Sometimes one of the tests would be positive while the other was dubious. Spectroscopic tests for hematoporphyrin were positive only when the other tests were markedly positive.

67. **The Heat Rays in Phototherapy.**—Scholtz ascribes much of the action of Finsen treatment to the penetration of the tissues by some of the heat rays. They affect the more highly colored parts below the surface more strongly than the surface itself, and the effect of stains is also to enhance the action of the heat rays. This explains the benefit of preliminary "sensibilisation" according to Dreyer. It also explains why the brownish, subcutaneous patches of lupus feel the effect of the phototherapy more than the sound skin above them. The heat rays, he finds, have a peculiarly strong—an elective—action on them, as also on any deep-seated structures previously colored with some stain.

68. **Pericarditis and Puncture.**—In 37 out of 56 cases of pericarditis observed by Doebert there had been preceding articular rheumatism. Only 8 of this class of cases succumbed, the rest recovered. The mortality was a little higher in the other cases of different etiology. He describes a few instructive cases to show that puncture made in the right side was able to produce the desired effect after failure of puncture in the left side. In one case very little could be evacuated as long as the subject reclined, but as soon as he sat up and leaned forward the fluid flowed freely. The heart must have been floating on the surface of the accumulated fluid, its suspension possibly aided by adhesions.

69. **Camphor as Valuable Adjuvant in Tuberculosis.**—For five years Koch has been making systematic use of camphor in pulmonary tuberculosis. At first he gave it in subcutaneous injections of 1 gm. of camphorated oil daily for four days with ten-day intervals. His results were extremely satisfactory, but the injection method has its drawbacks, so he gives the camphor now in inunctions. He makes a salve with about .4 gm. camphor in the amount rubbed in at one time. He uses percutilan as a vehicle, a new substance which he says "actually slips through the skin." A little balsam of Peru is added and eucalyptus and rosemary oil. These inunctions are made by the patient on five successive days and then a ten-day pause. The amount of sputum increases remarkably by the second day and then expectoration almost ceases, while the other symptoms are correspondingly improved. Equally favorable results were observed in emphysema and bronchitis.

Deutsches Archiv f. klinische Medizin.

Last indexed page 1527.

71 (LXXIX, Nos. 5-6.) *Causes of Chronic Habitual Constipation. H. Lohrisch.—Die Ursachen der Chronischen habituellen Obstipation im Lichte systematischer Ausnutzungsversuche.

72 *Ueber Agglutination von Typhus-Bacillen bei Proteus- und Staphylokokken-Infektion. Ludewig und Steinberg.

73 *Distribution of Nitrogen in Urine in Health. A. Landau.—Ueber die Stickstoffvertheilung im Harne des gesunden Menschen.

74 Coagulation of Blood. P. Morawitz.—Zur Kenntnis der Blutgerinnung.

75 Relations of Digestive to Urinary Ferments. J. Gruber.—Ueber die Beziehungen der Verdauungs- zu den Harnfermente.

76 *The Phonendoscope. Sehrwald.—Ueber die Brauchbarkeit des Phonendoskops.

77 Blood Staining. R. May and L. Grunwald.—Beiträge zur Blutfärbung.

78 Formation of Sugar Out of Albumin. H. Lüthje.—Die Zuckerbildung aus Eiweiss.

79 *Metabolism in Hyperthermia. F. Lieser and J. Schmid.—Ueber den Stoffwechsel bei Hyperthermie.

80 *Influencing of Period of Coagulation of Blood in Living Organism. F. R. Bange.—Ueber Beeinflussung der Gerinnungszeit des Blutes im lebenden Organismus.

81 Experimenteller Beitrag zur Frage der Cholämie. A. Landau.

82 Cryoscopy in Case of Absorption of Serous Effusions. L. v. Kelly and A. v. Torday (Budapest).—Ueber die Verwertung des kryoskopischen Verfahrens bei der Beurteilung der Resorption chronischer Brustfellexsudate und anderer seröser Flüssigkeitsansammlungen. See editorial page 1529.

71. **Constipation Due to Too Perfect Assimilation.**—Lohrisch has found by his researches on metabolism that certain cases of habitual constipation are due to excessive utilisation of the nourishment ingested, thus leaving too little refuse to be expelled. The flora normally in the intestines do not find the scanty fecal substances an appropriate culture medium, and

there is not sufficient fermentation and putrefaction to stimulate peristalsis.

72. **Agglutination of Typhoid Bacilli in Proteus and Staphylococcus Infections.**—In 2 cases of a proteus and staphylococcus ear affection, the blood serum was found to have notable agglutinating power for the typhoid bacillus. Experiments with rabbits and guinea-pigs showed that inoculation with proteus as also with staphylococcus cultures had a marked influence on the increase of the agglutinating power for the typhoid bacilli. Cultures of streptococci, Asiatic cholera and other germs showed none of this effect.

76. **The Phonendoscope.**—Sehrwald insists that the phonendoscope can be made to give variable findings at will, and that it is by no means as reliable as the ordinary stethoscope.

79. **Metabolism in Hyperthermia.**—Linser and Schmid had occasion to observe a brother and sister with universal ichthyosis hystrix affecting the entire body, except the face. The sweat glands were incapable of functioning anywhere except on the face. In a hot-air apparatus their temperature rose twice as fast as that of control subjects owing undoubtedly to the lack of the radiation of heat in the sweat secretion. There was no increase in the elimination of nitrogen, even during long-continued high temperature, if it did not go above 102 F., but this followed whenever 104 was reached. Other particulars of the metabolism in hyperthermia were exhaustively studied on these subjects. The application of the heat had an unmistakably beneficial action, evidently improving the functioning of the skin, as also in 3 cases of acne. The experiments showed that increased elimination of nitrogen in the urine consequent on very high temperatures, is paralleled by an increase in the purin nitrogen, ammonia, amido-acid nitrogen and phosphates. There was no evidence, however, of sugar, acetone, acetic acid or beta oxybutyric acid albumin or of formed elements. The respiratory quotient grew smaller.

80. **Influencing of Coagulation in Living Organism.**—The details of 83 tests on animals and 10 on human subjects are tabulated to show the influence of gelatin and other substances on the coagulation of the blood. The practical results are that calcium lactate has a decided influence in this respect. This influence is most marked in subjects with pathologically low coagulating property. He gave 1 to 2.5 gm. a day, with 3 gm. in one case and 30 gm. in another. The increase in the coagulating property under its influence subsided after two or three hours. The only instance in which it failed to exert this action was in a case of pernicious anemia.

Jahrbuch f. Kinderheilkunde, Berlin.

Last indexed XLI, page 1378.

83 (LVII, No. 6.) *Zur Kenntnis der chronischen Ernährungsstörungen der Säuglinge (nutritional disturbances in infants). F. Steinitz.
84 Bau und Entwicklung des kindlichen Fusses (development of child's foot). Spitzy (Prague).
85 Plat Foot in the Child. Seifert.—Der Plattfuss des Kindes.
86 Zur Kenntnis der Scharlachinfektion (wound scarlet fever). v. Berkely. One case.
87 (LVIII, No. 1.) *Pathology and Symptomatology of 60 Cases of Cerebrospinal Meningitis. Soerensen (Copenhagen).—Fieber und Krankheitsbild der epidemischen Cerebrospinalmeningitis.
88 *Bakterinrie bei Kindern (in children). G. Mellin (Helsingfors).
89 Die Blod-Reaktion im Blute bei Diphtherie. S. Weiss (Vienna).
90 Geheilter Fall von congenitalem chronischem Hydrocephalus. F. Sulavik.
91 Zur Aetiologie der Chorea minor. G. v. Manasaek.
92 Zweimaliges Auftreten von Laryngitis crouposa innerhalb 5 Wochen (twice in five weeks). C. v. Schoeller.
93 Fall von ca. Orange-grossen Myxolipoßrom der Niere bei einem 4¼ jährigen Kinde. Reinach.
94 (Supplementary No.) Anatomische Untersuchung über den Magendarmcanal des Säuglings (alimentary canal in nurelings). C. E. Bloch (Copenhagen).
95 Zur pathologischen Anatomie der Poliomyelitis anterior acuta infantum. E. Prastorius.
96 *Polymyositis im Kindesalter. A. Schüller (Vienna).
97 *Ueber Agglutination bei Scharlach (in scarlet fever). Hasenknopf and Salge (Berlin).
98 Pyonephrose als Complikation einer choleriformen Enteritis bei congenitaler doppelseitiger Hydronephrose eines 6 monatlichen Kindes. O. Reinach.
99 Review of Scandinavian Pediatric Literature.—Uebersicht aus der nordischen pädiatrischen Literatur.
100 (No. 2.) Physikalische chemische Untersuchungen über Kuhmilch (cow's milk) H. Hots (Zurich).
101 Measurements of Surface of Infant's Body and Its Significance for Needs as to Nourishment. W. Lissauer.—Ueber Oberflächenmessungen an Säuglingen und ihre Bedeutung für den Nahrungsbedarf.
102 *Ueber das Vorkommen von Diphtherie-Bacillen beim gewöhnlichen Schnupfen der Säuglinge (in ordinary infantile coryza). L. Bailin.
103 Zur Pathologie des Blutes im frühen Kindesalter (blood in infancy). M. Mosse and D. Grünbaum.
104 Mediastinales Emphysem bei tracheotomierten Kindern. C. Leiner.
105 (No. 3.) *Head'sche Zonen bei Kindern (in children). L. Bartenstein.
106 Zur Pathologie und path. Anatomie der Meningitis serosa interna acuta im Kindesalter. C. Beck (Aix).
107 Zur Sekretion der Speicheldrüsen, insbes. der Glandula submaxillaris im Säuglingsalter (in infancy). F. Schilling.
108 Zur Ernährungs-Physiologie des Säuglings (nutrition of infants). Wurtz.
109 Physiologic Limits of Hemoglobin Proportions and Number of Blood Corpuscles in Children. Anna Perlia.—Zur Kenntnis der physiologischen Grenzen des Hemoglobingehalts und der Zahl der Bluthäsperchen im Kindesalter.
110 Zur Coza vara infolge Früh-Rachitis. M. Coha.

83. **Chronic Nutritional Disturbances in Infants.**—Steinitz summarizes his numerous researches in the assertion that a milk rich in fat causes a loss to the infantile body in fixed alkali. The fat causes more alkali to be used up in the intestines and evacuated in the feces. This entails an increased output of ammonia to compensate this loss of alkalies.

87. **Cerebrospinal Meningitis.**—Soerensen reviews the pathology and symptomatology of 60 cases of cerebrospinal meningitis. In the 19 cases that came to autopsy tuberculous foci were found in 4.

88. **Bacteriuria in Children.**—Mellin has found only 11 cases on record in the literature, and adds 10 observed at Helsingfors. The colon bacillus was responsible in 8 cases, and the staphylococcus albus in 2, a lad of 10, and an infant. The symptoms were unimportant, and treatment with salicylates and local rinsing out the bladder with a weak disinfectant speedily cured the condition.

96. **Polymyositis in a Boy of 7.**—After recovery from whooping cough the child had a fever for four days with dyspepsia and a floating exanthem, followed by symptoms of pronounced polymyositis. After persisting three weeks all the symptoms vanished and recovery was complete in eight weeks. Schüller compares with this the similar cases on record, with others of progressive ossifying myositis, etc. There are only 5 other cases of primary acute polymyositis in children—like his case—on record. One was of a fibrous type, one a dermatomyositis; one was consecutive to an infectious sore throat and one to some other infection. One child recovered completely in a few weeks, and one after a few months, but the others were left with paresis and atrophy of some of the muscles.

97. **Agglutination in Scarlet Fever.**—It is still an open question whether the streptococcus is the causal agent of scarlet fever or merely a secondary parasite. The experiences related show that scarlet fever streptococci are agglutinated by serum from scarlet fever patients, but that the serum loses this property as convalescence terminates. Streptococci from other sources are not influenced by scarlet fever serum, and serum from other sources does not agglutinate the scarlet fever streptococci. Passage through animals attenuates, but does not entirely abolish the agglutinating property. The agglutination observed indicates, however, that there is some direct biologic connection between the streptococci and the scarlet fever subject. Notwithstanding this, Hasenknopf and Salge do not think we are justified in assuming that the scarlet fever streptococcus is necessarily the specific causative agent. They are also very dubious as to whether an anti-streptococcus serum derived from the horse will find in the human body the needed complements.

102. **Diphtheria Bacilli in Infantile Coryza.**—Bailin found diphtheria or pseudo-diphtheria bacilli 11 times in 63 children suffering from ordinary coryza. In 9 instances the bacilli were virulent. He accepts them as accidental parasites, never the cause of the coryza. He does not regard the presence of the bacilli as menacing, but the children are closely supervised and antitoxin is injected whenever symptoms develop that even remotely suggest diphtheria. Actual diphtheria has never developed in a single instance. The communication proceeds from the Berlin Children's Asylum (Kinderasyl).

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105. **Head's Zones in Children.**—Bartenstein's experience at Breslau confirms Head's assertions in regard to the increased sensitiveness of certain zones of the skin in case of affections of the internal organs. He found them frequently in children over 3 years of age. These findings will explain a number of hitherto mysterious phenomena which have been ascribed to hysteria or neurasthenia. He also found that the trembling of the muscles of the eyelids when the eyes are shut is of frequent occurrence in the offspring of neurasthenic parents. He found the Head zones in 46 cases of various internal affections, and believes that it may prove possible to influence the internal affection by revulsion applied to these zones.

Monatsschrift f. Geb. und Gynäkologie, Berlin.
Last indexed page 1295.

111 (XIX, No. 3.) Kasuistischer Beitrag zur Lehre von den Fibromyomen der Bauchdecken (of abdominal walls). A. Stein (Heidelberg).
112 *Ueber Primäres Carcinom der Clitoris. M. Jacoby (Breslau).
113 *Dauer-Resultate der Prolaps- und Retroflexions-Operationen. F. Baatz (Königsberg).
114 (No. 4.) *Justification of Vaginal Total Extirpation of Uterine Cancer. F. Schauta.—Die Berechtigung der vaginalen Totalexstirpation bei Gebärmutterkrebs.
115 *Serious Interference with Childbirth in Consequence of Ventrofixation and Suspension. F. W. Lynch (Baltimore).—Kaiserschnitt und schwere Geburtsstörung infolge Ventrofixation und Suspension.
116 Surgical Treatment of Acquired Incontinence of Urine in Women. C. G. Cumston (Boston).—Chirurgische Behandlung des erworbenen unwillkürlichen Harnabganges bei Frauen.
117 *Ueber Struma ovarii. K. Kretschman. (Concluded.)
118 Biologic Behavior of Blood of Mother and Child and the Protecting Substances in Normal Milk. P. Schenk.—Untersuchungen über das biologische Verhalten des mütterlichen und kindlichen Blutes und über Schutzstoffe der normalen Milch.
119 Permanent Results of Operations for Displacements of Uterus. J. Bonnenfeld (Berlin).—Ueber die Dauererfolge der Operationen bei Falschlagen des Uterus.

112. **Primary Carcinoma of Clitoris.**—Jacoby warns that long-continued eczema or pruritus should suggest malignant disease in the clitoris. Neoplasms here seem to be always malignant. He reports 2 cases. One was inoperable. The other patient was cured by ablation of the growth. He gives the outlines of 65 cases from the literature. Eleven patients were permanently cured by extirpation of the growth.

113. **Remote Results of Operations for Prolapse and Retroflexion.**—Analysis of the results after 217 various operations for these conditions compels Baatz to the following conclusions: Prolapse of the vagina without retroflexion should be treated by plastic intervention. When associated with movable retroversion in the childbearing age, and all primary prolapses of the uterus, prolapse with immovable retroflexion, and very large and total prolapses, ventrofixation with a plastic operation on the vagina offers the greatest chances for successful intervention. Vaginofixation is preferable for prolapse of the vagina and movable retroversion in the climacterium, especially if the intervention is completed by a plastic operation. In cases of isolated retroflexion, either movable or not, ventrofixation affords the best remote results. Supravaginal amputation of the portio is indicated for much hypertrophy of the portio or elongation of the cervix.

114. **Vaginal Removal of Uterine Cancer.**—Schauta remarks that no one yet has systematically studied the behavior of the higher glands in case of carcinoma of the uterus. Only a few persons have investigated even the inguinal and preinguinal glands. He has been studying various groups of glands from this point of view. The largest gland found was cancerous, and measured 12 by 18 mm., but others, nearly as large, were entirely free from cancer, one measuring 12 by 15 mm. The smallest cancerous gland was 1 by 1 mm. He found cancerous degeneration in 271 out of 1,182 glands examined, and of this number only 43 were sacral glands; 91 were iliac glands; 44 were the lumbar glands on both sides of the aorta; 19 were celiac glands along the aorta upward to the root of the diaphragm; 32 were superficial, and 42 were deep inguinal glands. The glands were entirely free from cancer in only 25 of the 60 cases examined. The most significant result of this research is that in such a large number of cases the accessible glands—those usually inspected and removed during an operation—were sound, while the remote, inaccessible glands—those included in the four last-mentioned groups above showed cancerous degeneration. In 35 per cent. of the total number of cases it would have been useless to remove the glands below, as the higher located glands were already involved. In only 13.3 per cent. were the high glands sound. Large, hard glands frequently show no trace of involvement, but cancer elements may be found not only in the connective tissue and lymph spaces, but also in veins between sound glands. The facts related demonstrate that the complete removal of the cancer with all its involved glands, if the glands are involved at all, is possible only in the rarest cases. A cancerous focus in a gland is liable to remain in the gland like an inclosed foreign body. After the removal of the primary focus the glandular focus generally subsides into a dormant condition, from which it may never arouse, or it may commence to proliferate during the menopause. In the second part of his article, Schauta reviews his clinical material with vaginal extirpation. The results confirm his advocacy of the vaginal route, which he has followed in 91 cases since 1901. Only 45.4 per cent. of the 230 cases that came to the clinic proved to be operable. The mortality was 12 per cent. He prefers the Schuchardt paravaginal incision, except when the vagina is exceptionally wide and elastic.

115. **Interference with Childbirth After Ventrofixation.**—Lynch has found 20 cases on record similar to the one he describes, in which cesarean section was necessary after ventrofixation to deliver the child. The fixation in some cases had not been intentional, but was due to adhesions developing after mere suspension.

117. **Struma of the Ovary.**—The diagnosis of this condition is aided by finding a large amount of effusion with a comparatively small tumor. When its strumous nature is seen as the ovary is exposed, the surgeon can leave the other ovary untouched during the childbearing age, as the affection has always been found unilateral to date and relatively benign. In all the cases known the left ovary was the seat of the lesion, and the patients had all passed the reproductive period.

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120 (L, No. 2.) *Research on Composition of Blood and Secretion of Urine in Eclampsia. W. Zangemeister.—Untersuchungen über die Blutbeschaffenheit und die Harnsecretion bei Eklampsie.
121 Advantages of Vaginal Drainage of Abdominal Cavity. O. Oberländer.—Ueber die Vortheile der vaginalen Bauchhöhlendrainage.
122 Zur Chirurgie des Ureters. K. Franz.
123 Ueber den Mechanismus der Dammrisse (lacerations of perineum). W. Zangemeister.
124 Zur Lehre von den Vaginal-Cysten. A. Falkner.
125 *Ueber Struma colloides cystica im Ovarium. M. Walthard.
126 (LI, No. 1.) Ueber Pseudo-Endotheliome des Eierstocks (of ovary). O. Polano.
127 Involution of Uterus in Mice. G. Burckhard.—Ueber Rückbildungsvorgänge am puerperalen Uterus der Maus.
128 Ueber interstitielle Gravidität. Weinbrenner. Two cases; 33 on record.
129 Ueber die subchorialen Cysten. V. Albeck.
130 *Scientific Basis for Conservative Myoma Operations. G. Winter.—Die wissenschaftliche Grundlagen der conservativen Myom-Operation.
131 (No. 2.) *Study of Freezing-point of Blood in Pregnancy and Parturition. H. Füth.—Ueber die Gefrierpunktserniedrigung des Blutes von Schwangeren, Kreissenden und Wöchnerinnen.
132 Ibid. Experimental.—Untersuchungen am Kaninchen über die Einwirkung der Kohlensäure und des Sauerstoffs sowie der Gravidität auf den Gefrierpunkt des Blutes, nebst Bemerkungen über den Sauerstoffgehalt des fötalen menschlichen Blutes.
133 Primärer Krukenbergscher Ovarial-Tumor. F. Schenk.
134 Zur Kenntnis der Ovarial-Blutungen (hemorrhages). O. Bürger.
135 Ueber die Hämatom-Mole. Bauereisen.
136 Detachment Layer of Placenta. G. Bessesbeck.—Ueber die Trennungsschicht der Plazenta in den verschiedenen Zeiten der Gravidität.
137 Successful Operation for Umbilical Hernia with Resection of Prolapsed Lobe of Liver in Two-days' Old fœtus. Ellmer.—Ueber Operation einer Nabelschnurhernie mit Resektion des vorgefallenen Leberlappens.
138 *Loss of Blood at Childbirth and Its Consequences for the Woman. F. Ahlfeld.—Die Blutung bei der Geburt und ihre Folgen für die Frau.

130. **Blood and Urine in Eclampsia.**—Zangemeister first established by comprehensive research on normal pregnancies and childbirths the standards for comparison with the eclamptic

cases. He determined the alkalinity of the blood, number of formed elements, chlorids, concentration of serum, freezing-point, etc., and for the urine, the acidity, proportion of the constituents, etc., establishing the "chlorid quotient," that is, the relations between the chlorids and the total salt molecules. He found the kidneys always anemic in eclamptic subjects, but nothing to indicate an uremic etiology for the eclampsia. The most striking change in the blood in eclampsia is the marked hyperglobulia, evidently due to loss of plasma. The chlorid quotient is usually constant, but in eclampsia it varies considerably. It averages much lower than in normal parturients, even down to 2 per cent.—and is very much less than during pregnancy, the average for which is 40 per cent. This phenomenon is probably due to some sudden interference with the circulation through the kidneys, manifestly the result of some contraction of the vessels in the kidneys. These contractions are part of the labor contractions and, in fact, the onset of the convulsions in eclampsia corresponds with the periods of rhythmic contractions of the uterus. Labor is unusually vigorous in eclampsia. Women with exceptionally energetic labor contractions are particularly prone to eclampsia. It is liable to come on with the first labor pains, especially in primiparæ and in case of artificial delivery. The labor contractions have long been known to have an unmistakable influence on delivery albuminuria. The labor pain is accompanied by contraction of the arterial blood vessels. This entails injury to certain organs, as their nourishment and function are impeded, and fatty degeneration, infiltration or anemic necrosis is liable to result. The sudden anemia in the brain causes convulsions, the anemia in the kidneys checks the elimination of water and of salts through them. This conception of eclampsia does not exclude the action of toxins, but shows that it is possible without them.

125. **Struma Ovarii.**—Walthard's 3 cases were distinguished by the large size of the tumors. One measured 11.5 by 7 cm.; one 6 by 8.5, and the other 13.5 by 7 cm. Each was examined in frozen sections. One patient is in perfect health years after the removal of the cystic tumor. Two of the tumors were evidently teratomata, with degeneration of the inclosed thyroid tissue.

130. **Conservative Myoma Operations.**—Winter knows of 10 abortions in 64 cases of pregnancy after simple ablation of subserous myomata, and 11 abortions in 58 cases of pregnancy after enucleation of subserous interstitial myomata—all operated on during the pregnancy. The children survive unharmed in all but one-sixth to one-fifth of such operations during pregnancy. The latter does not seem to render the operation any more serious for the woman. The statistics from the German clinics show that the prognosis of supravaginal amputation is worse than that of conservative enucleation. He concludes from his own and the experience of others that myomata of the uterus should be operated on radically, as a rule. Conservative intervention is indicated only when the patient is very anxious for offspring and wishes to retain the function of menstruation. Only one-fourth of the women were satisfied with the results of conservative operations in his experience.

131. **Freezing-Point of Blood in Pregnancy and Parturition.**—Füth announces that he found the freezing-point of the blood .035 to .04 of a degree C. higher in pregnant women and in parturients than in the non-pregnant and non-parturient.

132. **Oxygen in Fetal Blood.**—The same writer describes comprehensive research along analogous lines on rabbits, further determining the influence of carbonic acid and of oxygen on the freezing point of the blood of gravid and non-gravid rabbits. He also presents arguments to sustain the view that human fetal blood contains oxygen. Among them he mentions the long interval that elapses before children extracted by cesarean section commence to breathe. The apnea may last several minutes.

138. **Loss of Blood at Childbirth and Its Consequences.**—Ahlfeld has the blood lost by the parturient collected by a funnel-shaped contrivance in the bed, opening into a graduated receptacle below. When more than 400 c.c. has escaped a physician is summoned. The average amount is 400 to 500 gm., but even larger amounts may be lost in normal births. The amount is usually proportional to the size of the child and the connected size of the placenta expanse and its weight. Pluriparæ lose more than primiparæ. The largest amount noted was 3,000 gm., and it caused comparatively little disturbance in the general health. A loss of 1,500 gm. is well tolerated by certain women, while in other cases it proved fatal. The morbidity of the puerperium is liable to be increased after considerable losses of blood. He was not able to detect any appreciable influence on the nursing capacity. He preaches constantly that the first half hour after the birth belongs to the woman, not to the child. His funnel bed has an opening in the mattress 22 cm. in diameter, into which fits a flat-edged, nickel-plated funnel, the tapering end projecting a few inches below the bed. A graduated cylindrical glass receptacle below catches the blood, after the thin pad and rubber sheet under the woman have been removed after delivery, and substituted by a sheet with a hole in the center. The blood that drips from the pad is measured, too, and also the blood lost with placenta.

THE PHARMACEUTICAL EXHIBIT.

The Exposition of Remedial Agents, Surgical Instruments, and Other Physicians' Supplies at Atlantic City.

One of the interesting features of medical society meetings is the exhibit made by the firms which manufacture physicians' supplies and medicines. At the annual sessions of the American Medical Association, the exhibit hall is well patronized. At the Atlantic City session abundant room is provided in the large entrance pavilion on Young's Pier. Nearby are the post-office, the Registration Bureau, the Information Bureau, the meeting places of several of the sections, and the General Meetings. We give below brief mention of most of the firms who are represented in this exhibit.

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W. D. Allison Company, Indianapolis—Spaces 44 and 45.

These well-known exhibitors at medical conventions will make their display this year at Atlantic City one of even greater value than usual. Several new appliances—their automatic table, improved cabinet and a new adjustable chair for oto-laryngologic specialists, and the Bihlmaier medical electric vibrator—will be shown for the first time. Every physician is naturally interested in seeing these latest additions to professional equipment.

American Ferment Company, Jersey City, N. J.—Space 61.

Here will be shown the well-known preparations of the vegetable ferments, caroid and bana-diastase (a diastasic preparation from the banana plant), in powder, tablets and liquid. The principal exhibit of the company will be a line of new pills, "pill triturates." It is claimed that the pills made by the "Mead Process" are more friable and more soluble than others. These qualities will be demonstrated at the booth.

American Peroxide and Chemical Company, New York—Space 54.

In this exhibit of peroxid of hydrogen, the manufacturers show their special product made by their own process, for which they claim superiority for the following reasons: absolutely non-explosive, no decomposition by reason of time or temperature, therefore absolute permanency and potency to the last drop; less acid than other preparations, consequently non-irritating. They will also show stearate of zinc in its many combinations, and a full line of proprietary and pharmaceutic products.

American Vibrator Company, Canton, Ohio—Space 97.

This firm will demonstrate the Tonjes aero-vibrant, a vibrator operated by compressed air. They claim it to be the only vibrator which truly vibrates and does not "jar" and "pound" the system. It can be operated with any air or nebulizer outfit. They will also show their air compressors which

do not require air tanks. These are operated by hydraulic or electric power, and constantly supply air pressure and volume equal to the power used. No air tank being used, the air remains pure and fresh.

Ammonol Chemical Company, New York City—Space 60.

This firm has not a great variety of preparations, but they have much to say and much evidence to offer as to the value of the different preparations of ammonol. They will show this stimulant, heart regulator, antipyretic and analgesic, in combination with salicylic acid, and with bromids, with codein, quinin, etc., and will lay great stress on its value and safety in the conditions for which it is indicated.

D. Appleton & Co., New York—Space 7.

The exhibit of medical works published by D. Appleton & Co. is worth a visit. Particular attention is called to the following new books, published this year: Fox's "Diseases of the Eye"; Pearce's "Diseases of the Nervous System"; Beck's "Röntgen-Ray Diagnosis and Therapy"; Leube's "Medical Diagnosis"; Janeway's "Clinical Study of Blood Pressure in Medicine and Surgery"; Boas' "Diseases of the Intestines," new edition.

Armour & Co., Chicago—Spaces 80 and 81.

A complete line of the laboratory products of this firm will be shown, including pepsin, pancreatin, extract of red bone marrow, nutrient wine of beef peptone, thyroids, suprarenalin, suprarenalin solution, and other organo-therapeutic agents. Those in charge of the booth will pay particular attention to their suprarenalin solution. Soluble beef will also be shown and an opportunity will be given to visitors to sample it.

Bernstein Manufacturing Company, Philadelphia—Spaces 74 and 75.

This company will show examples of their entire line of goods, which includes metallic bedsteads, ward carriages, sterilisers, and other aseptic hospital furniture of great variety; operating tables, physicians' office tables and chairs, together with many other special devices for the equipment of physicians' offices and hospitals.

Frank S. Betz Company, Chicago—Spaces 57 to 59.

In the space occupied by the Frank S. Betz Company are shown hundreds of surgical instruments of all uses and varieties. A beautiful static machine, completely equipped, which the manufacturer claims will give a 25-inch spark, is to be given away to some one of the visitors at the exhibit. Mr. Betz will lay special stress on the quality and the reasonable prices of his instruments and machines.

James G. Biddle, Philadelphia—Spaces 87 and 90.

James G. Biddle, general sales agent for the Roentgen Manufacturing Company, will exhibit the latest type of heavy output x-ray coil constructed by his company—an 18-inch coil with electrolytic and self-starting mechanical interrupter operating on 110 volts direct current. The coil will deliver very heavy output, capable of the most rapid radiographic work. Mr. Biddle will also exhibit a very interesting portable coil, and other apparatus.

Bioplasm Company, New York City—Space 72.

Among the new things in materia medica, the Bioplasm Company exhibits a preparation from animal glands, under the name of "bioplasm," in several forms. They declare it to be a wide departure from all former glandular extracts and nuclein preparations, it more closely resembling the serums, as it evidently acts in the blood stream. They claim it has shown the remarkable property of rapidly increasing the scavenging and antitoxic elements of the blood, and are prepared to show strong clinical backing for the claim of bioplasm to the attention of the up-to-date practitioner.

P. Blakiston's Son & Co., Philadelphia—Space 16.

An attractive and very instructive exhibit of standard medical, dental, pharmaceutical, chemical and allied scientific books is made by this well-known firm of publishers and booksellers. In the binding of some of the more recent cloth books issued by this house, viz., Montgomery's Gynecology, Edgar's Obstetrics, Tyson's Practice, etc., an interesting departure has been made from the cut-and-dried styles in vogue for many years. The result is a volume of greatly increased attractiveness and distinguishableness. Another feature, too, is noted in the exhibit of this progressive house and that is the increase in half-morocco and the decrease in full sheep-bound books. The preference claim for the morocco binding is that it is more serviceable in every way and permits of a more richly and better and more durably bound book.

Bovinine Company, New York—Space 70.

The Bovinine Company's exhibit of their product is an excellent arrangement, and they claim that, as their connection throughout the world is only with physicians, their preparation should be investigated and its claims shown to be without basis or substantiated. Their agent, Mr. M. S. Smith, will be glad to talk with any physician who calls at his exhibit. He will furnish to those desiring them copies of the exhaustive work on "Hematherapy," which will be found of interest.

Churchill Chemical Company, New York—Space 86.

At the exhibit of the Churchill Chemical Company is shown pinagestin elixir, which they say is the only pharmaceutic product of pineapple juice on the market prepared exclusively for physicians' prescribing. They call attention to the remarkable proteid digesting power of pineapple juice, and to the fact that it will operate in an acid, neutral or even alkaline medium. Another product of this firm worthy of attention is Churchill's Viburnum Compound, in which the notoriously nauseating properties of its medicinal constituents are said to be completely disguised by their incorporation with a fragrant, spicy and most delightful combination of pure and non-toxic aromatics, thereby forming a compound pleasant, palatable and delectable to the taste.

Clark & Roberts, Indianapolis—Spaces 18 and 19.

Clark & Roberts intend making an exhibit of surgical furniture. This will be of especial interest to physicians, as the firm makes a specialty of high-grade furniture for physicians' offices and operating rooms. They are calling attention to the embodiment in their goods of all the latest designs and improvements in this line, as well as some very fine finishes, both in the white enamel and the grained enamel. They will show a line of surgical tables, instrument cabinets, etc.

F. A. Davis Company, Philadelphia—Space 64.

One of the book exhibits will be that of F. A. Davis Company, the publishers of Sajous' "Cyclopedia of Practical Medicine," Sajous' "Internal Secretions," etc., and numerous other unique and valuable works. They will have on exhibit Dr. Ball's new book, "Modern Ophthalmology," which they claim to be the most beautifully illustrated work of the kind published for many a decade. Attending members and visitors will find it of interest to examine this book and the many other splendid books by able writers recently issued by this house.

Denver Chemical Manufacturing Company, New York City—Space 62.

One of the popular booths will be that of antiphlogistine, the preparation which during the last few years has come so into prominence. The company will be represented at the Atlantic City session by Mr. W. W. Burgess, Mr. Paul Fleet, Mr. Thos. F. Moore and one or two other genial and popular representatives.

DeZeng Optical Company, Philadelphia—Space 53.

The DeZeng Optical Company will make a complete and handsome exhibition of their instruments in Space 53, near the outer end of the pier. They will make a special feature of the new DeZeng luminous ophthalmoscopes and retinoscopes which are attracting wide attention and which have been extensively advertised for some time past in THE JOURNAL. Practical demonstrations will be given daily of both of these instruments on living eyes, and every one is invited to witness them.

Electro-Surgical Instrument Company, Rochester, N. Y.—Spaces 35 and 36.

Here will be found on exhibit a full line of electrically lighted instruments, including among others the following: Bransford-Lewis' ureter cystoscope, Elsner's ureter cystoscope, Belfield's diagnostic cystoscope, Koch's urethroscope, Swinburne's posterior urethroscope, Tuttle's air dilating rectal tube, Beach's rectal tube, Cook and Pratt's rectal specula, Einhorn's esophagoscope and gastrodiaphane, Jackson's postnasal illuminator, Wishart's ophthalmodynamometer. They will also have a very complete display of electro-therapeutic apparatus.

E. Fougera & Co., New York City—Spaces 91 and 92.

E. Fougera & Co. display colchi-sal (colchicin-methyl-salicylate comp.), which is well established as a gout remedy, and betul-ol (methyl-oleo-salicylate comp.), for cutaneous exhibition in myalgias; kiglolds of glycerophosphate of quinin dissolved in benzoates of eucalyptol and creosote, Huxley's syrups and tablets of the compound glycerophosphates, which they claim to be permanent and the most concentrated preparations on the market, and last, the new antiseptic salt, huxsal, which is a soluble salt, partially a chemical combination and partially a mechanical mixture of antiseptic materials, which, in 2 per cent. solution, they claim to be equal as a germicide to bichlorid of mercury.

Fritzsche Brothers, New York City—Space 22.

The firm of Fritzsche Brothers will make an exhibit of photographs of the *Gramineæ*, whose pollen is concerned in the causation of hay fever, and specimens of the pollen from which they prepare "pollantin." This pollantin is the antitoxin serum for hay fever, prepared under the direction of Prof. Dunbar.

R. W. Gardner, New York City—Spaces 68 and 69.

The firm of R. W. Gardner will exhibit their well-known perfected products. The original syr. Gardner's syrup hydriodic acid (hydrogen iodid), originated by Mr. Gardner in 1878, needs no comment. The original Gardner's C. P. ammonium hypophosphite was brought forward by Mr. Gardner in 1897. The original pil. hypo-quinidol (Gardner), first introduced to the profession in May, 1898, is a non-toxic quinin, effective in half the dose of the sulphate. It is followed by no tinnitus or shock.

Gleason Grape Juice Company, Fredonia, N. Y.—Space 83.

An exhibit and demonstration of the unfermented fruit and grape juices, grape juice and apple juice, which this company prepares, will be here shown. They claim that the physician should be able to depend on the purity of these products, as they are made from finest Concord grapes and selected hand-picked apples. The juices are stored in glass and sold only in glass and they offer a forfeit of one hundred dollars for every bottle of their juice found to contain preservatives or adulterations of any kind.

Globe Manufacturing Company, Battle Creek, Mich.—Space 63.

Several beautiful nebulizing outfits will be seen here under the banner "Globe Nebulizers," including multinebulizers on individual bases, ready to be attached to air supply, elaborate table outfits, with multinebulizers, receivers, metal and oak tables, with plate-glass tops, all finished in the style peculiar to their apparatus, a handsome shining gold enamel for the receivers, and combination of green and gold for metal tables. Their line of hand nebulizers will also be displayed, and altogether their exhibit will merit a call.

F. A. Hardy & Co., Chicago—Space A.

These wholesale opticians and makers of eye, ear, nose and throat surgical instruments will have their exhibit at the Steel Pier, the place of meeting for the Section on Ophthalmology and the Section on Otology and Laryngology. They will exhibit a line of high-grade ophthalmologic apparatus and surgical instruments of the latest and most improved models and will show a number of new specialties. The exhibit will be under the personal supervision of Mr. Kratzmueller and will prove to be of great interest and advantage to the oculist and to the ear, nose and throat surgeon.

Horlick's Food Company, Racine, Wis.—Spaces 76 and 77.

Horlick's Food Company exhibit their unique product, Horlick's malted milk, so widely known as a nutrient for infants and invalids. Pure milk is thus administered very efficiently, either for the immature digestion of infants or the weakened assimilative powers of the adult. The delicious cold beverages and malted milk ice cream served during the session give the physician an opportunity to judge of its value as a nutrient and refrigerant in fever cases.

Imperial Granum Company, New York City—Space 73.

The exhibit of "Imperial Granum" will aim to show the usefulness and palatableness of this preparation for the feeding of infants and invalids. This is one of the widely used foods for feeding infants and for use in stomach affections, and the representatives in charge of this exhibit will be ready to describe the preparation of "Imperial Granum" to all interested.

Keasbey & Mattison Company, Ambler—Space 26.

These extensive manufacturers of granular effervescent salts will exhibit alkalithia and phosphate and benzoate of soda. They will emphasize that alkalithia is an old and thoroughly tested combination of uric acid solvents, and that it constitutes a very efficient treatment for gout, rheumatism and such manifestations of lithemia as eczema, pruritus, mental perversions, migraine, asthma and hay fever. They will call attention to the preparation, phosphate and benzoate of soda, as an ideal hepatic stimulant and intestinal antiseptic.

W. T. Keener & Co., Chicago—Space 9.

The specialty of this house is supplying books of all publishers. Their exhibit will contain some of the important new books of American, English, French and German medical publishers. Perhaps some of the most important new books are: Leaf's translation of the "Anatomy of the Lymphatic System," from Poirer and Charpy's treatise, which has been called the best text on anatomy in any language; Gould's "Surgical Diagnosis," and Dr. Burney Yeo's new work on "Climates and Mineral Springs."

Keystone Electric Company, Philadelphia—Spaces 17 to 20.

They will have on exhibit the following: X-ray apparatus; galvanic, faradic and cautery batteries; wall cabinets, table plates, Finsen lights, vibratory massage apparatus, current controllers, motor dynamos, diagnostic lamp outfits, eye and ear oscillators, eye magnets, electrodes, air compressors, etc.

Kress & Owen, New York City—Space 100.

Among the exhibits we find glyco-thymoline, on which the company lays great stress as representing the application of scientific principles to the formulating of a preparation which harmonizes with the secretions of the tissues treated. Kress & Owen Company will be represented with an exhibit where glyco-thymoline can be obtained by members of the Association.

Lea Brothers & Co., Philadelphia—Spaces 99 to 101.

Lea Brothers & Co. have contributed a most attractive exhibit of their standard publications. Perhaps the most important is the new work on surgery by v. Bergmann, etc., of which the American edition is edited by Prof. William T. Bull. Other new and notable volumes are "Starr on Nervous Diseases," "Roger on Infectious Diseases," "Brewer's Surgery," "Morrow on Social Diseases," "Findley's Gynecological Diagnosis," and the revised edition of "Musser's Diagnosis," "Simon's Clinical Diagnosis," "Dunglison's Dictionary," "Ewing on the Blood" and "Hyde and Montgomery on the Skin."

Charles Lentz & Sons, Philadelphia—Space 66.

This firm will show a full line of surgical instruments, of their own well-known manufacture, for which they claim special superiority. One of their claims is that their cutting instruments undergo such processes in making as render them tenacious of a keen edge. They will show a complete outfit of Dr. Andrew J. Downes' latest electrothermic hemostatic instruments, and their formaldehyd-gas disinfector.

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J. B. Lippincott Company, Philadelphia—Space 56.

This exhibit will present, in a large oak case, the ornamental electrical devices displaying the date of the foundation of the house, 1792, and the year of the exhibit. This case will contain some one hundred volumes, embracing the most recent and important of Lippincott's medical and surgical works. It is to be arranged for the convenience of those who would personally examine the publications in detail and offers an excellent illustration of the fine and substantial work in binding books for which the company is noted.

Londonderry Lithia Spring Water Company, Nashua, N. H.—Space 71.

The Londonderry Lithia Spring Water Company will exhibit its universally known water in its standard sized bottles (still and effervescent). Members of the American Medical Association and families will be served with Londonderry gratuitously at the exhibit booth. The company calls attention to Londonderry as having been officially designated as the exclusive mineral water to be served, gratis, at all the smokers which occur. Handsome souvenirs will be given physicians and ladies by the Londonderry Company.

Malt-Diastase Company, New York City—Space 30.

The Malt-Diastase Company will exhibit their highly diastasic nutrients, maltzyme (plain); maltzyme with cod-liver oil; maltzyme with cascara sagrada; maltzyme with hypophosphites; maltzyme with iron, quinia and strychnia; maltzyme with iron, and maltzanta (maltzyme with yerba santa in tablet form). The representatives will try to make it worth while for physicians to visit this booth and form an acquaintance with these products. They declare that there is no better example of the high quality work done by legitimate manufacturers than maltzyme.

The Maltine Company, New York City—Space 79.

The various maltine preparations will make up the bulk of this exhibit. These preparations include various medicaments for various conditions, all with the basis of maltine. They will also show neoferrum, the new iron, explaining the manner of manufacture and showing the crude materials from which this therapeutic agent is prepared.

McKesson & Robbins, New York City—Spaces 48 and 49.

A new dentifrice, called calox, is a feature of this exhibit, the introduction of which, they claim, marks an era in the history of dentifrices. Calox is described as an oxygenated tooth powder which, when brought in contact with the fluids of the mouth, liberates oxygen as does hydrogen dioxid, sterilizing the mouth as well as cleaning the teeth. It unites the triple rôle of tooth powder, mouth wash and antacid. They also exhibit natrozone, pyrozone, the McKesson & Robbins nose cup for nasal lavage and the McKesson & Robbins toilet salt.

E. B. Meyrowitz, New York City—Space B.

The exhibit of E. B. Meyrowitz will include a complete line of eye, ear, nose and throat instruments, ophthalmologic and electric apparatus. Many new instruments will be shown, among them patterns of instruments devised by European specialists, and exhibited in this country for the first time. This exhibit will be shown in a separate room on the Steel Pier, and a cordial invitation to visit it is extended to all interested.

Nelson Scientific Instrument Company, Chicago—Space 84.

This firm, formerly known as N. O. Nelson & Co., manufacturers of static machines, will exhibit a machine of a new design. Mr. N. O. Nelson will be there personally to explain the merits of the apparatus, and will emphasize that the Nelson Scientific Instrument Company is making an effort to uphold the standard of static machines, believing that the medical profession do not want a cheap static machine, for such would be an expensive investment.

The Norwich Pharmacal Company, Norwich, N. Y.—Space 50.

The Norwich Pharmacal Company exhibits unguentine, of course. This is, perhaps, their best-known specialty; but, having for 20 years been extensive makers of standard pharmaceuticals, they also display pills, tablets, effervescent salts, elixirs, etc. Among the specialties are: Zemacol, a new animal derivative; unguentine spray, the latest unguentine adjunct; and sal tonique, their new effervescent tonic aperient. Their perfected antiseptic thermometer case will especially interest physicians. The first completed instruments made from the new model will be shown and demonstrated. Aluminum medals are to be used as souvenirs.

Oakland Chemical Company, New York City—Space 29.

This exhibit will consist of a display of dioxogen. This solution of H_2O_2 3 per cent., is the only pharmaceutic made by the company. As an illustration of the tendency toward specializing it is instructive, for, while there is nothing secret about the process of manufacture, the company has devoted its entire attention toward developing improved methods and perfecting details, with the result of a steadily increasing demand for its goods.

Philadelphia Casualty Company, Philadelphia—Space 56.

A number of competent men will exhibit and explain the scope and protection of this company's professional accident policy. This Pennsylvania corporation, with assets exceeding $750,000, claims to issue the only policy ever written that provides absolutely full indemnity for death or disability from septicemia or septic infection, without reference to the circumstances of simultaneous wound and infection. The company will also demonstrate the utility of its malpractice insurance policy, and the special features not to be found in other policies of the kind.

Physicians' Standard Supply Company, Philadelphia—Space 5.

This company manufactures nebulizers, vaporisers, douches, air pumps, nebulizing fluids (for nose, ear, throat and lungs), spirometers, rubber goods, and tablets. A special feature of their exhibit will be the unique hay-fever douche, to be presented to each physician who will call for it. The perfection vaginal douche is their latest and most improved syringe, now being widely introduced and deservedly popular. The woman's monthly protector will be among their new outfits at the exhibit.

Henry B. Platt, New York City—Space 73.

This exhibit will be devoted to "Platt's Chlorides," the odorless disinfectant. The value of this liquid for all the purposes for which a disinfectant is used will be dilated on by the representatives in charge.

Rebman Company, New York City—Space 98.

At Stand 98 this company will exhibit all their recent publications. They desire to call particular attention to Jacobi's "Portfolio of Dermochromes," published in two volumes, and to their display of plates from that work, showing the remarkable results produced by a recently invented four-color process; also Freund's "Radiotherapy" and "Health and Disease in Relation to Marriage,' by various eminent German authorities, just published.

Rigaud & Chapoteaut, Paris, France—Spaces 91 and 92.

Rigaud & Chapoteaut are still pushing cypridol, lecithin, morrhuol creosote, strontium iodid, bromid and lactate, apiolin and cerevisin, which have been so thoroughly advertised that it is unnecessary to add anything here. They will give especial attention to their new product, glycogen. They state that when glycogen is given on an empty stomach it appears to increase vitality, steady the heart and to distinctly act as a prophylactic, antitoxic, having bactericidal properties, beside controlling diabetes and albuminuria.

Rochester Surgical Appliance Company, Rochester, N. Y.—Space 82.

A very complete line of electrically illuminated instruments and sundry appliances will be shown: Cystoscopes, urethroscopes, current controllers, vaginal specula, rectal specula, eye magnets, galvanic, faradic and cautery batteries, cold miniature lamps, etc. This company calls attention to the care and

skill with which their instruments are made and to the indorsements of many eminent specialists as well as hundreds of general practitioners. Their exhibit should prove of interest to every one who attends the convention.

W. B. Saunders & Company, Philadelphia—Space 78.

Directly facing the main entrance of the large room in which the exhibit is held, Space 78 is occupied by an excellent display of books shown by W. B. Saunders & Co., the prominent medical book publishers of Philadelphia, New York, and London. The display will certainly be a most attractive one and will give a very good idea of the high character of the Saunders publications, both as to literary superiority and mechanical excellence. The exhibit will be in charge of Dr. J. A. Heffernan and Mr. O. M. Smith, who will take pains to give every physician an opportunity to see such books as he is not already familiar with.

Schieffelin & Co., New York City—Spaces 68 and 69.

A general line of chemical and pharmaceutical products will be here shown, with a special display of their soluble coated pills, which make a very handsome appearance, the transparency of the coating showing the exact coloring of the different masses. As usual, especial attention will be given to hemoquinin, antimalarial and reconstructive; uriform, urinary antiseptic; heromal and heroterpin, their specialties.

Smith, Kline & French Company, Philadelphia—Space 27.

In the Smith, Kline & French Company's exhibit space will be shown both Eskay's food and Eskay's neurophosphates. Their representatives will give all visiting physicians as much information and demonstration as possible. Samples of these two products in particular, as well as descriptive printing matter and souvenirs, will be handed to all those showing sufficient interest to take them home and to give the products a trial. They expect to serve Eskay's food to those wishing to test its nutrient properties as well as its palatability.

Arthur H. Thomas Company, Philadelphia—Space 67.

This exhibit is devoted principally to microscopes and clinical apparatus for physicians' office use in the examination of blood, urine, sputum, etc. Particular attention will be called to samples of museum jars for pathologic laboratories, incubators, sterilizers, microtomes and projection microscopes. The new Stanton blood pressure indicator will be demonstrated, as will also the new physicians' portable microscope in compact case carrying mechanical stage, hemoglobin apparatus, hemacytometer, etc. A skilled attendant will be on hand to demonstrate these specialties.

The Trommer Company, Fremont, Ohio—Space 25.

The exhibit of the Trommer Company will consist of Trommer extract of malt and combinations, and palmiacol, the new derivative of guaiacol. Samples of these will be for gratuitous distribution and the company cordially invites the medical profession to call and make their wants known in this connection. The exhibit will be in charge of the veteran representative, Dr. Paul Plessner, who is vice-president of the Trommer Company; other well-known representatives will assist.

Vibrator Instrument Company, Chattanooga, Tenn.—Space 39.

In this space of the exhibit several Chattanooga vibrators will be on exhibition; also a treating table, and any physician so desiring will be given a treatment by the demonstrators in charge. Complete catalogues and literature on the subject of mechanical vibratory stimulation and the Chattanooga vibrator will be on hand there for distribution. This vibrator is sold to physicians only.

R. V. Wagner & Co., Chicago—Spaces 13 and 14.

R. V. Wagner & Co.'s exhibit will be of unusual interest, as they will have a working demonstration of the new Wagner adjustable focus tube. They call attention to this as the only tube not focused by guess. It is adjusted to a perfect focus while in operation. The magnetic device is very simple, and those interested in *x*-ray work will obtain information of practical value. They will also exhibit a new type of their mica plate static machine adapted to both *x*-ray and high-frequency work.

Henry K. Wampole & Co., Philadelphia—Space 1.

The preparations which the above company will exhibit include their lines of pills, tablets and elixirs and the specialties on which they place so much emphasis for elegance of preparation, potency of medicinal agents and accuracy of composition. Among these will be Wampole's tasteless preparation of the extract of cod-liver oil, formolid (the antiseptic solution), liquid wheat, hemogen, saw palmetto wine, syrup of hydriodic acid, etc.

Wm. R. Warner & Co., Philadelphia—Space 85.

This exhibit will consist of a general variety of pharmaceuticals, including the prominent specialties of the company, among which we may name ingluvin, lithia water tablets, elixir salicylic comp., liquid pancreopepsin and a number of others. Of special interest to the practitioner is the granular effervescent calcium carbonate, also the two recipes granular effervescent formia comp., A and B.

Welch Grape Juice Company, Westfield, N. Y.—Spaces 88 and 89.

This display of Welch's grape juice will be pleasing to the physician, for the value of grape juice for the sick is well recognized. This firm claims absolute purity, the juice being sterilized and then hermetically sealed, so that there is no preservative, no alcohol, but only the pure juice of the grape. They expect to dispense the ice cold juice to all physicians.

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Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

A TEXT-BOOK OF OPERATIVE SURGERY, Covering the Surgical Anatomy and Operative Technic Involved in the Operations of General Surgery. Written for Students and Practitioners. By Warren Stone Bickham, Phar.M., M.D., Assistant Instructor in Operative Surgery, College of Physicians and Surgeons, New York. Second Edition. With 559 Illustrations. Cloth. Pp. 984. Price, $6.00 net. Philadelphia, New York and London: W. B. Saunders & Co. 1904.

PRELIMINARY BULLETIN ON INSECTS OF THE CACAO, Prepared Especially for the Benefit of Farmers. By Charles S. Banks, Entomologist, Bureau Government Laboratories. 1904, No. 11. Department of the Interior. Bureau of Government Laboratories. Biological Laboratory, Entomological Division, Bulletin No. 1. Paper. Pp. 58. Manila: Bureau of Public Printing. 1904.

DISEASES OF THE INTESTINES. By Dr. I. Boas, Specialist for Gastrointestinal Diseases in Berlin. Second Revised and Enlarged American Edition. Translated by Permission from the German Edition, with Special Notations and Additions. By Seymour Bash, M.D., New York City. With 49 Illustrations. Cloth. Pp. 600. Price, $3.00. New York and London: D. Appleton & Co. 1904.

JAHRESBERICHTE über die Fortschritte in der Lehre von den Pathogenen Mikroorganismen umfassend Bacterien, Pilze und Protozoën unter Mitwirkung von Fachgenossen bearbeitet und herausgegeben von Dr. med. F. von Baumgarten, und Dr. med. P. Tangl. Achtzehnter Jahrgang. 1902. Erste Abtheilung. Paper. Pp. 588. Leipzig: Verlag von S. Hirzel. 1904.

THE CLOSURE OF LAPAROTOMY WOUNDS, as Practiced in Germany and Austria. Including Detailed Methods and Views Communicated by Over Fifty Leading Surgeons. Edited and Translated by Walter H. Swanfield, F.R.C.S., Ed., M.D. Ed., Fellow of the Obstetrical Society of London. Cloth. Pp. 72. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1904.

ADOLESCENCE, Its Psychology and Its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion and Education. By G. Stanley Hall, Ph.D., LL.D., President of Clark University and Professor of Psychology and Pedagogy. Vols. I and II. Cloth. Pp. 580 and 784 respectively. Price, $7.50. New York: D. Appleton & Co. 1904.

THE MOTHERS' MANUAL. A Month by Month Guide for Young Mothers. By Emelyn Lincoln Coolidge, M.D., Visiting Physician of the Out-patient Department of the Babies' Hospital, New York. Illustrated. Cloth. Pp. 262. Price, $1.00 net. New York: A. S. Barnes & Co. 1904.

ANNUAL REPORT OF THE SURGEON GENERAL OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE OF THE UNITED STATES. For the Fiscal Year 1903. Paper. Pp. 872. Washington: Government Printing Office. 1904.

TWENTY-THIRD ANNUAL MEETING OF THE HAHNEMANN HOSPITAL ASSOCIATION, with Report of Managers and Officers, 1903. Paper. Pp. 67. Erie, Pa.: Herald Printing and Publishing Co. 1904.

TRANSACTIONS OF THE FIFTH ANNUAL MEETING, THE ROCKY MOUNTAIN INTERSTATE MEDICAL ASSOCIATION. Cloth. Pp. 152. Salt Lake City, Utah, Sept. 1 and 2, 1903.